QUALITY CONTROLS
CATALOGUE

Fortress Diagnostics

Fortress Diagnostics

How To Order

What information do we need?

Please quote your:

1. Name
2. Address
3. Telephone Number
4. Fax Number
5. Email Address
6. Purchase Order Number
7. Product Description
8. Catalogue Number
9. Quantity Required
10. Any Specific Delivery Instructions

Where should you send your quote?

Please send your quote to us using one of the following options:

Through Our Website
fortressdiagnostics.com/contact-us

Over the Phone
+44 (0)28 9448 7676

By Email
info@fortressdiagnostics.com

Advancing Global Diagnostics

Fortress Diagnostics is a well-established, multi award-winning IVD manufacturer based in the United Kingdom, supplying an extensive portfolio of products to over 100 countries worldwide.

We have been providing our distributors and end users with high quality products for over 20 years. The objective of Fortress Diagnostics is to provide the highest level of diagnostic solutions, globally, through continued investment in research and development.

Why choose Fortress Diagnostics?

Our proven product performance, matched with our selection of reputable distribution partners, has been instrumental in our continued success and growth. Built on a culture of quality and performance, we are committed to providing our customers with a reliable service and results they can trust.

Our ISO 13485:2016 certification for the design, development, manufacturing and distribution of in vitro diagnostics (IVD) medical reagents and instrumentation endorses our product range and ensures that the highest quality standards are constantly maintained.

Through our global distribution network, we provide highly accurate medical testing solutions to immunology, haematology and serological laboratories in hospitals, medical centres, clinics, blood banks and research institutions in over 100 international markets.

Hosting an in-house Research and Development team, we are committed to creating the next innovative IVD solutions to exceed our customer's requirments and advance the healthcare industry. We reinvest over 30% of our turnover in R&D every year.

Fortress Quality Controls & Calibrators

Quality controls and calibrators play a vital role in clinical diagnostics by ensuring the accuracy and reliability of test results. Quality controls are designed to monitor the performance of diagnostic assays and reagents, helping to detect any variations or issues that may arise during testing. This ongoing assessment ensures that laboratories maintain high standards and can identify problems before they affect patient care. Calibrators, on the other hand, are used to establish the measurement accuracy of diagnostic instruments by providing a known reference point against which test results can be compared.

Together, these elements contribute to standardisation and consistency in laboratory testing, fostering confidence in the results provided to healthcare professionals. Ultimately, robust quality control and calibration processes are essential for delivering precise diagnoses, guiding effective treatment decisions, and ensuring patient safety in clinical practice.

Fortress Quality Controls (**Seraqual**) are supplied with instrument and method specific assigned values. We can also provide quality control solutions, tailor-made to customer specification and requirements, enabling laboratories to be more efficient and reduce costs. We also work with many universities, research institutions and laboratories to develop quality control and calibration solutions for unique and novel biomarkers.

The Seraqual Portfolio

Fortress Diagnostics Seraqual Controls and Calibrators are available for:

Antioxidants
Aqueous Standards
Blood Gas & Electrolytes
Cardiac
Clinical Chemistry
Coagulation/Haemostasis
Diabetes
Drugs of Abuse
Haematology
Immunoassay/ Infectious
Immunology/Proteins
Lipids
Maternal Screening
Neonatal Screening
Paediatric Screening
Speciality Controls
Thalassaemia
Therapeutic Drugs
Torch
Paediatric
Urine
Xanthochromia

Why Choose Fortress Quality Controls & Calibrators?

1

Customer Support

Fortress Diagnostics employ a highly-skilled team of technical support staff to assist customers with all their needs and technical questions. We are always on-hand to help.

2

Cost Saving

Our Quality Controls Range have a wide-ranging analyte content, enabling laboratories to consolidate their quality control purchases and therefore benefit from cost savings.

3

Accurate

Manufactured by Fortress Diagnostics in our ISO 13485:2016 accredited labs, Seraqual products are designed to provide highly accurate target, values mimicking human samples, with minimal matrix effects being observed.

4

Reliable

Our fully in-house logistics team enables us to ship orders globally and our customer support team are available to assist with any labs' special requirements or custom orders to ensure customer satisfaction is always exceeded.

5

Third Party Controls Suitable For Global Market

We manufacture a wide range of third party controls which are value-assigned, without bias, towards any methods or instrumentation, enabling labs to meet their ISO accreditations through accurate and robust training.

6

High Quality

Seraqual products are manufactured without the use of preservatives or stabilisers, utlising human-based material, which have undergone stringent quality checks for HIV, HBsAg, HCV, HTLV, and Syphilis for FDA approved methods. Products of animal origin are not added in the Fortress controls, therefore eliminating the lack of specificity in antibody-based tests.

7

Flexible

As well as offering an extensive range of controls, Fortress Diagnostics has the ability to manufacture custom quality control products to meet any customer requirements providing a fully flexible solution.

8

Long Shelf Life

Fortress Diagnostics offer quality controls in two different formats - lyopholised (stable for up to 4 years) and liquid (stable with a shelf life of up to 18 months) - enabling labs to utilize lot supply and save costs.

9

Traceability

Fortress Controls and Calibrators are CE marked and fully traceable to the reference material according to ISO 17511 and ISO 18153 directives.

10

Consolidation

Fortress Quality Controls offer a wide parameter range allowing more analyte coverage with a single control.

11

Value Assignment

The Fortress value assignment involves six European Reference Laboratories, (chosen on the basis of the analytes performed in these laboratories), each of which performs five independant runs.

12

Compatibility

Fortress Controls are made from human derived material, with minimal matrix effects being observed.

Find Out More

Website

fortressdiagnostics.com

The Fortress Diagnostics website details our full product range, allowing users to add products of interest to a “Quote Request“ which is sent directly to our sales team. We regularly post blogs, event information, resources and company updates.

Quality Control Inserts Portal

insert.fortressdiagnostics.com

Fortress Diagnostics are excited to launch the new Fortress QC Inserts Portal. The portal allows customers to easily search our database of quality control inserts by product name, catalogue number or batch number in our easy-to-use filter tool. Inserts can be viewed online or downloaded in PDF format.

Brochures & Catalogues

fortressdiagnostics.com/resources

All Fortress Diagnostics brochures and catalogues can be viewed and downloaded on the Fortress Resource Hub in PDF format.

Videos

youtube.com/@fortressdiagnostics

Subscribe to our YouTube channel to explore information videos, tutorial guides for Seraqual 365, interviews for World Awareness Days and more.

Social Media

Explore and follow our social media pages across **Instagram**, **LinkedIn**, **Facebook** and **Twitter**. We regularly post updates on product launches, events Fortress are exhibiting at, news from the world of diagnostics and company developments.

1

SECTION 1

ANTIOXIDANTS

Antioxidant Controls

Antioxidant quality controls in diagnostics are crucial for ensuring the accuracy and reliability of tests that measure oxidative stress and antioxidant levels in biological samples. These quality controls are used to validate the performance of diagnostic assays, ensuring that the test results are consistent and accurate. Positive controls, which contain known quantities of antioxidants, help confirm that the assay is working correctly, while negative controls, without antioxidants, ensure there is no false detection of antioxidant activity.

By using antioxidant controls, laboratories can detect any potential issues with the assay, such as reagent degradation or equipment malfunction. In addition to positive and negative controls, diagnostic assays may also use blank and solvent controls to account for any potential interference from other substances or experimental factors. Consistent use of antioxidant quality controls helps to standardize the measurement of oxidative stress biomarkers, ensuring that results are comparable across different laboratories and studies. These controls are critical in clinical diagnostics, where accurate measurements of antioxidant levels can be used for disease risk assessment, monitoring therapeutic responses, and guiding treatment decisions, particularly in conditions like cardiovascular diseases, diabetes, and neurodegenerative disorders.

The Fortress Seraqual Antioxidant Quality Controls are lyophilised for enhanced stability, offer excellent accuracy and precision and cover a range of key antioxidants in clinical practice. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Glutathione Peroxidase Control

- This control is presented in a Lypholised format stable to expiry date at 2-8 °C.
- Reconstituted stability 3 days at 2-8 °C.
- 100% Human serum based.

Description	Size	Cat No.	Type
Glutathione Peroxidase Control	5 x 1 ml	BXC0556A	Lyo

Glutathione Reductase Calibrator & Control

- Fortress Glutathione Reductase Controls are intended for monitoring accuracy ad precision.
- Calibrators and Controls are supplied in a Lypholised format stable up to expiry at 2-8 °C.
- Reconstituted stability 7 day at 2-8°C or 3 days at 25 °C.
- 100% Human serum based.

Description	Size	Cat No.	Type
Glutathione Reductase Calibrator	5 x 1 ml	BXC0999A	Lyo
Glutathione Reductase Control	5 x 1 ml	BXC0460A	Lyo

Superoxide Dismutase Control

- The Control is presented in Lypholised format stable to expiry date at 2-8 °C.
- Reconstituted stability of 7 days at 2-8 °C.
- 100% Human serum based.

Description	Size	Cat No.	Type
Superoxide Dismutase Control	5 x 1 ml	BXC0433A	Lyo

Total Antioxidant Status Calibrator & Control

- 100% Human serum based.
- Reconstituted stability of 7 days at 2-8 °C.

Description	Size	Cat No.	Type
Total Antioxidant Status (TAS) Calibrator	1 x 1 ml	BXC0555A	Lyo
Total Antioxidant Status (TAS) Control	5 x 5 ml	BXC0554A	Lyo

SECTION 2

AQUEOUS STANDARDS

Aqueous Standards

Aqueous standards in diagnostics are reference solutions used to calibrate and validate diagnostic assays, ensuring accurate measurement of analytes in biological fluids such as blood, urine, and saliva. These standards consist of known concentrations of target molecules dissolved in water, closely mimicking the physiological environment.

By using aqueous standards, laboratories can calibrate instruments and establish a baseline for comparison with patient samples. This allows for precise detection and quantification of biomarkers, essential for diagnosing diseases and monitoring health conditions. Aqueous standards are especially important in ensuring consistency across different diagnostic platforms and laboratories. They help identify any variation or drift in instrument performance over time and confirm that the reagents used in tests are functioning properly. In clinical diagnostics, the use of well-prepared aqueous standards ensures that test results are reliable and reproducible, which is critical for making informed medical decisions, particularly in areas such as metabolic monitoring, hormone assays, and infection diagnostics.

The Fortress Aqueous Standards are available in a liquid stable format for convenience and ease-of-use, with a long shelf life, and are traceable to reference standard material.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Aqueous Standards

- Liquid stable (ready-to-use).
- Long shelf life.
- Traceable to reference standard material.

Description	Method	Size	Cat No.	Type
Albumin	45 g/L (4.5g/dL)	10 x 5 ml	BXCSTD01	LS
Calcium	Referenced against NIST 909b (2.5mmol/L 10mg/dL)	10 x 5 ml	BXCSTD02	LS
Chloride	Referenced against NIST 909b (75mmol/L)	10 x 5 ml	BXCSTD03	LS
Chloride	Referenced against NIST 909b (100mmol/L)	10 x 5 ml	BXCSTD04	LS
Cholestrol	Referenced against NIST 909b (5.17mmol/L 200mg/dL)	10 x 5 ml	BXCSTD05	LS
Creatinine	Referenced against NIST 909b (177 µmol/L 2 mg/dL)	10 x 5 ml	BXCSTD06	LS
Creatine/Glucose/Urea Standard	Referenced against NIST 965a / 909b (5.55 mmol/L 100mg/dL/ 177 µmol/L / 8.33mmol/L)	10 x 5 ml	BXCSTD24	LS
Glucose	Referenced against NIST 965a (5.55 mmol/L 100mg/dL)	10 x 5 ml	BXCSTD07	LS
Glucose-Fructose Standard		5 x 1 ml	BXCSTD26	LS
Haemoglobin Standard	For Drabkin's Method (18g/dL)	5 x 10 ml	BXCSTD08	LS
Haemoglobin Standard Set	For Drabkin's Method (8, 10, 12, 15 & 18g/dL)	5 x 1 x 10 ml	BXCSTD09	LS
Iron	35.8 µmol/L (0.2 mg/dL)	10 x 5 ml	BXCSTD10	LS
Iron	107.4 µmol/L (0.6 mg/dL)	10 x 5 ml	BXCSTD11	LS
Lactate	4.44mmol/L (40mg/dL)	10 x 5 ml	BXCSTD12	LS
Magnesium	Referenced against NIST 909b (1.0 mmol/l2.43mg/dL)	10 x 5 ml	BXCSTD13	LS
Phosphorus	1.61 mmol/L (5 mg/dL)	10 x 5 ml	BXCSTD14	LS
Potassium	Referenced against NIST 909b (0.5 mmol/L)	10 x 5 ml	BXCSTD15	LS
Potassium	Referenced against NIST 909b (5 mmol/L)	10 x 5 ml	BXCSTD16	LS
Pyruvate	2 mmol/L	10 x 5 ml	BXCSTD17	LS
Sodium	Referenced against NIST 909b (150.0 mmol/L 150 mEq/L)	10 x 5 ml	BXCSTD18	LS
Total Protein	Referenced against NIST 927d (60g/L (6.0 g/dL)	10 x 5 ml	BXCSTD19	LS
Triglycerides	Referenced against NIST 909b (2.28 mmol/L 200mg/dL)	10 x 5 ml	BXCSTD20	LS
Urea	Referenced against NIST 909b (8.33 mmol/L 50mg/dL)	10 x 5 ml	BXCSTD21	LS
Uric Acid	Referenced against NIST 909b (595 µmol/L 10mg/dL)	10 x 5 ml	BXCSTD22	LS
Urinary Copper Standard	Referenced against NIST-SE 3114 (1.6mol/L)	10 x 5 ml	BXCSTD25	LS
Urinary/CSF Protein Standard	Referenced against NIST 927d (1g/L)	10 x 5ml	BXCSTD23	LS

SECTION 3

BLOOD GAS & ELECTROLYTES

Blood Gas & Electrolyte Controls

Blood gas and electrolyte controls in diagnostics are essential for ensuring the accuracy and reliability of tests that measure critical parameters like pH, oxygen (PaO2), carbon dioxide (PaCO2), and key electrolytes such as sodium, potassium, chloride, and bicarbonate. These controls, typically pre-prepared solutions with known concentrations, are used to calibrate and validate diagnostic equipment, such as blood gas analyzers.

By regularly running these controls, laboratories can detect any inaccuracies in the testing process, ensuring that instruments and reagents are functioning correctly and that test results are precise. In clinical settings, the proper use of blood gas and electrolyte controls helps prevent diagnostic errors, which are crucial in high-stakes situations such as critical care and emergency medicine. Any variation in these tests can significantly impact patient management, from adjusting ventilation settings to correcting electrolyte imbalances.

The Fortress Blood Gas & Electrolytes Quality Controls contain values for ten parameters, with values assigned by European Reference Laboratories, covering pH, pCO2, pO2 and electrolytes. Available in a liquid stable format for convenience and ease-of-use. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Blood Gas & Electrolyte Controls

- Liquid stable controls with a shelf life of 1 year when stored, unopened at 2-8 °C.
- Values are assigned by European reference laboratories.
- Store at 2-8 °C. Do not freeze or expose to temperatures greater than 30 °C.
- When opened, analyse immediately for Blood Gas parameters and use within 1 hour for electrolytes.

Analytes

Calcium Chloride Glucose	Lactate Potassium Sodium	pCO2 pH pO2	Total CO2

Description	Size	Cat No.	Type
Blood Gas & Electrolyte Control (Level 1)	1 x 2 ml	BXC0108A	LS
Blood Gas & Electrolyte Control (Level 1)	10 x 2 ml	BXC0108D	LS
Blood Gas & Electrolyte Control (Level 2)	1 x 2 ml	BXC0108B	LS
Blood Gas & Electrolyte Control (Level 2)	10 x 2 ml	BXC0108E	LS
Blood Gas & Electrolyte Control (Level 3)	1 x 2 ml	BXC0108C	LS
Blood Gas & Electrolyte Control (Level 3)	10 x 2 ml	BXC0108F	LS
Blood Gas & Electrolyte Control (Tri-Level)	30 x 2 ml	BXC0108G	LS

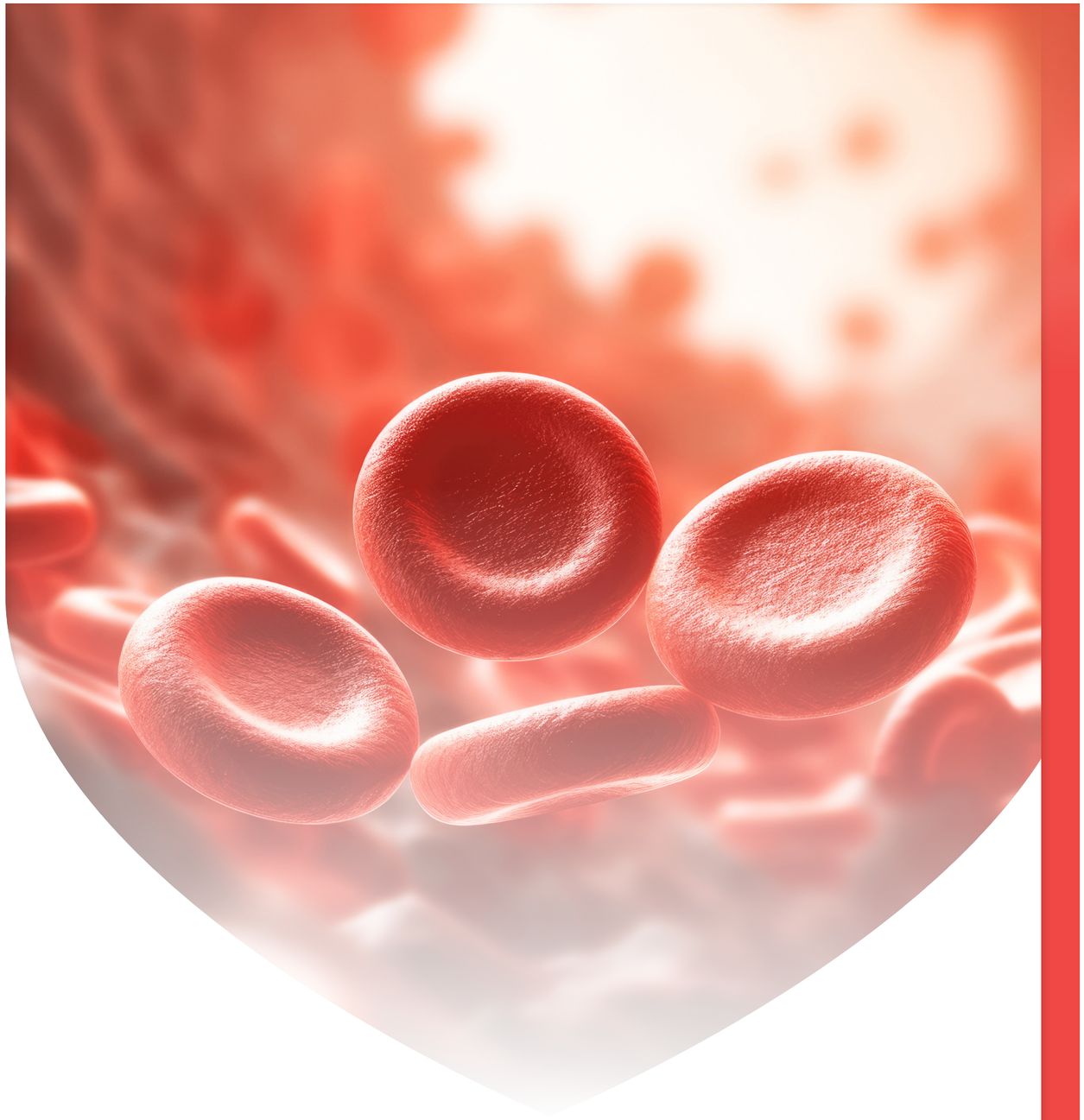
Electrolyte Controls

- Liquid stable format with a shelf life of 2 years when stored at 2-8 °C.
- Values are assigned by European reference Laboratories.
- Store at 2-8 °C. Do not freeze or expose to temperatures greater than 30 °C.
- When opened the analytes are stable for a period of 15 days when stored at 2-8 °C.

Analytes

Chloride (ISE & Colorimetry)	Potassium (ISE & Colorimetry)	pH	Sodium (ISE & Colorimetry)

Description	Details	Size	Cat No.	Type
Electrolytes Calibrator		5 x 5 ml	BXC0140A	LS
Electrolytes Control (Level 1)	**Low (Na, K, Cl)**	5 x 5 ml	BXC0143A	LS
Electrolytes Control (Level 2)	**Normal (Na, K, Cl)**	5 x 5 ml	BXC0144A	LS
Electrolytes Control (Level 3)	**High (Na, K, Cl)**	5 x 5 ml	BXC0145A	LS



SECTION 4

BLOOD GROUPING

Blood Grouping Controls

Blood grouping controls in diagnostics are vital for ensuring the accuracy of blood type determination, which is essential for safe blood transfusions, organ transplants, and pregnancy management. These controls are standardised samples with known blood types (A, B, AB, O, and Rh factor) used to verify the performance of blood typing assays and equipment. By including both positive and negative controls in the testing process, laboratories can ensure that reagents are reacting correctly with antigens and antibodies, reducing the risk of errors in identifying a patient's blood group.

Using blood grouping controls regularly helps maintain the reliability of diagnostic tests, preventing potentially life-threatening transfusion reactions caused by incorrect blood typing. It also ensures consistency across different testing environments, whether in routine clinical laboratories or emergency settings. These controls allow for early detection of any technical issues with reagents, equipment, or the procedure itself, ensuring accurate and dependable blood group determination, which is critical for patient safety.

The Fortress Seraqual ABO-Rhesus Blood Grouping Quality Control Set is available in a liquid stable format for convenience and ease-of-use and covers all major blood types. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

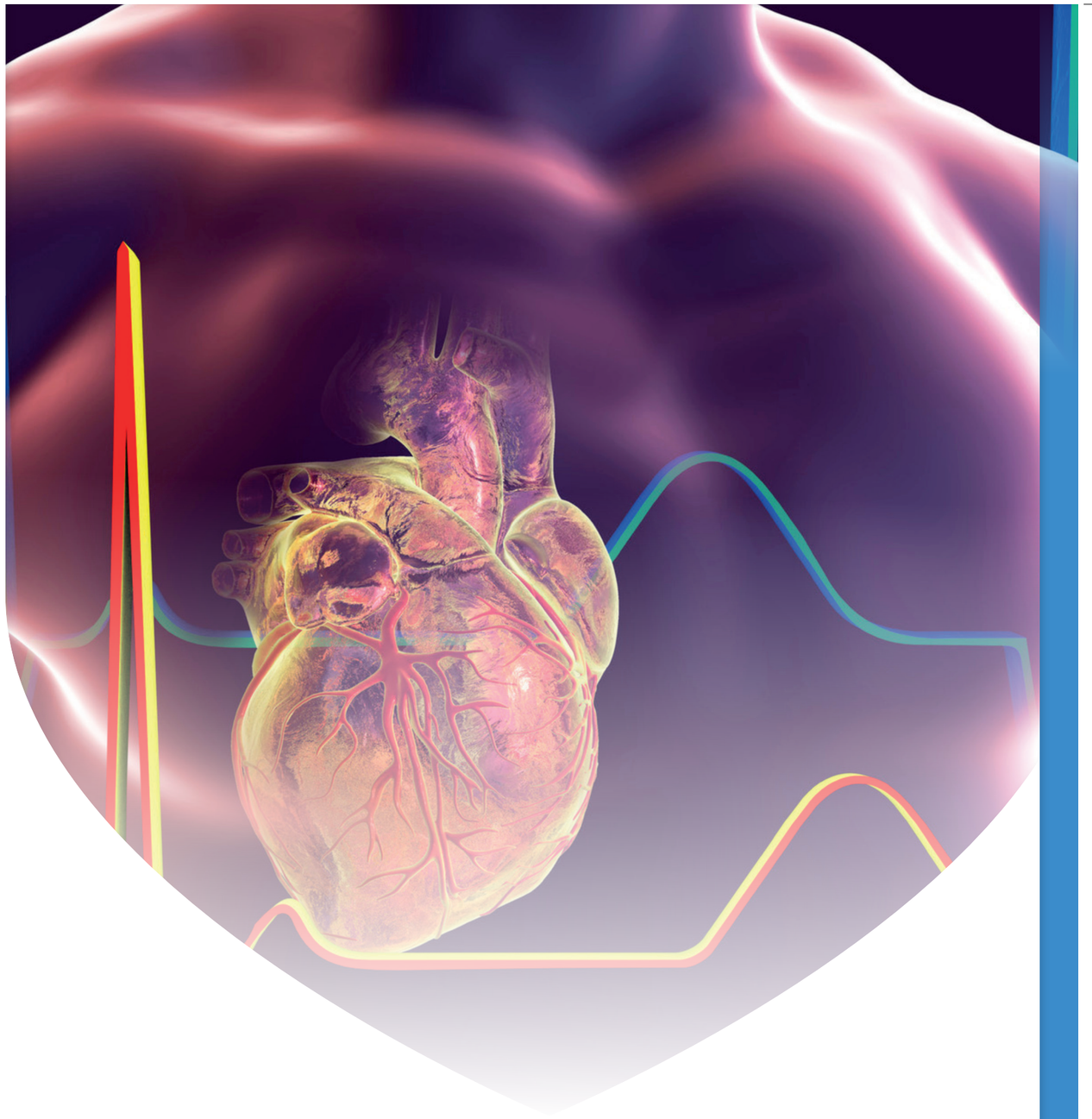
ABO-Rhesus Blood Grouping Control Set

- Ready-to-Use
- Covers all major blood types.
- Total Blood Kit.

Analytes

A AB	B O	Rhesus Rh	Kell Phenotype

Description	Details	Size	Cat No.	Type
ABO-Rhesus Blood Grouping Control Set	For use Rh-reagents and Anti-K Monoclonal	4 x 4 ml	BXC0070A	LS
Monoclonal Anti-D Negative Control		1 x 10 ml	BDNC0010	LS
Precise Weak Anti-D Control	Sensitivity Control for AHG	1 x 5 ml	BGWD0005	LS



SECTION 5
CARDIAC

Cardiac Controls

Cardiac controls are essential in diagnostics for ensuring the accuracy and reliability of tests that measure key cardiac biomarkers, such as troponin and B-type natriuretic peptide (BNP), which are critical for diagnosing heart attacks, heart failure, and other cardiovascular conditions. These controls, which contain known concentrations of these biomarkers, help validate the performance of diagnostic assays, ensuring that testing equipment and reagents are working properly. By using these controls, laboratories can identify potential issues early, minimising the risk of inaccurate test results that could lead to misdiagnosis or inappropriate treatment.

The role of cardiac controls is particularly crucial in emergency and critical care settings, where timely and precise biomarker measurements are vital for guiding immediate medical interventions. Reliable cardiac diagnostics help physicians make informed decisions about treatment strategies, such as initiating therapies for acute coronary syndromes or adjusting treatments for chronic heart conditions. Regular use of cardiac controls ensures consistency across tests, supporting better patient outcomes by enabling accurate diagnosis and monitoring of cardiovascular health.

The Fortress Seraqual Cardiac Quality Controls have been designed to cover several cardiac analytes.
Available in a lyophilised format for enhanced stability and manufactured from 100% human based serum to negate matrix effect. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Cardiac Controls

- Values are assigned by European reference laboratories.
- Lyophilised format stable up to expiry at 2-8 °C.
- Reconstituted stability of 5 days at 2-8 °C or 4 weeks at -20 °C.
- 100% Human serum base.

Analytes

Homocysteine CK Total	CK MB Activity CK MB Mass	Digoxin Troponin I	Troponin T Myoglobin

Description	Details	Size	Cat No.	Type
Cardiac Control (Level 1)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 2 ml	BXC0455A	Lyo.
Cardiac Control (Level 1)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 1 ml	BXC0455B	Lyo.
Cardiac Control (Level 2)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 2 ml	BXC0456A	Lyo.
Cardiac Control (Level 2)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 1 ml	BXC0456B	Lyo.
Cardiac Control (Level 3)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 2 ml	BXC0464A	Lyo.
Cardiac Control (Level 3)	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	5 x 1 ml	BXC0464B	Lyo.
Cardiac Control Set	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	3 x 1 x 2ml	BXC0450A	Lyo.
Cardiac Control Set	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	3 x 1 x 1ml	BXC0450B	Lyo.
Cardiac Tri Level Control	**CK Total, CKMB Activity, CKMB Mass, Tni,TnT, Digoxin, Homocysteine, Myoglobin**	3 x 1 x 0.5ml	BXC0881A	Lyo.

CK/CK MB Calibrators & Controls

- Lyophilised format stable up to expiry at 2-8 °C.
- Values are assigned by European Reference Laboratories.
- 100% Human serum base.
- Reconstituted stability 5 days at 2-8 °C, 8 hours at +25 °C and 4 weeks at -20 °C.

Analytes

CK Total | CK MB Activity

Description	Size	Cat No.	Type
CK/CK MB Calibrator	1 x 2 ml	BXC0454A	Lyo.
CK/CK MB Calibrator	5 x 2 ml	BXC0454B	Lyo.
CK/CK MB Control (Level 1)	1 x 2 ml	BXC0453A	Lyo.
CK/CK MB Control (Level 1)	5 x 2 ml	BXC0453B	Lyo.
CK/CK MB Control (Level 1)	10 x 2 ml	BXC0453C	Lyo.
CK/CK MB Control (Level 2)	1 x 2 ml	BXC0459A	Lyo.
CK/CK MB Control (Level 2)	5 x 2 ml	BXC0459B	Lyo.
CK/CK MB Control (Level 2)	10 x 2 ml	BXC0459C	Lyo.

D-DIMER Calibrators & Controls

- Lyophilised format stable up to expiry at 2-8°C.
- Prepared from human serum.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
D-Dimer Calibrator Set	5 x 1 x1ml	BXC0788A	Lyo.
D-Dimer Control Set (Level 1 & Level 2)	2 x 1 x1ml	BXC0789A	Lyo.

Homocysteine Calibrators & Controls

- Fortress Homocysteine controls are intended for monitoring accuracy and precision.
- The Calibrators & controls are provided in a Lyophilised format stable up to expiry at 2-8 °C.
- 100% Human serum based.

Description	Size	Cat No.	Type
Homocysteine Calibrator (2 Levels)	2 x 1 x 1ml	BXC0691B	Lyo.
Homocysteine Control (2 Levels)	2 x 1 x 1 ml	BXC0692A	Lyo.

Myoglobin Calibrators & Controls

- Lyophilised to achieve long shelf life.
- Reconstituted stability of 30 days at 2-8°C and 12 months at -20°C.

Description	Size	Cat No.	Type
Myoglobin Calibrator Series	5 x 1 x 0.5ml	BXC0486A	Lyo.
Myoglobin Control	1 x 0.5ml	BXC0487A	Lyo.

NTProBNP Calibrators & Controls

- Lyophilised format stable to expiry at 2-8 °C.
- Prepared from human serum.
- Reconstituted stability of 8 hours at 2-8°C.

Description	Details	Size	Cat No.	Type
NTProBNP Calibrator	**Reconstitued Stability 8 hours at 2-8°C**	1 x 1 ml	BXC0335A	Lyo.
NTProBNP Control Series (6 Levels)	**Reconstitued Stability 8 hours at 2-8°C**	6 x 1 x 1 ml	BXC0336A	Lyo.
BNP Calibrator Level 1	**human Serum Base, Reconstituted Stability 8 hours at 2-8°C**	1 x 0.5ml	BXC0455S	Lyo.
BNP Calibrator Level 2	**human Serum Base, Reconstituted Stability 8 hours at 2-8°C**	1 x 0.5ml	BXC0456S	Lyo.

Troponin-T (High Sensitivity) Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Cut-off value of 13.5ng/L for automated systems.
- Suitable for use in point-of-care testing.
- Open vial stability of 1 week, at 2-8°C.

Description	Details	Size	Cat No.	Type
Troponin-T High Sensitivity Control	**For use on all major systems**	3 x 1 ml	BXC0457A	LS

Troponin-I Controls & Calibrators

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 5 days at 2-8°C.

Description	Details	Size	Cat No.	Type
Troponin-I Control Set	**For use on all major systems**	2 x 1 x 1 ml	BXC0470A	Lyo.
Troponin-I Calibrator Set	**For use on all major systems**	6 x 1 x 1 ml	BXC0473A	Lyo.

SECTION 6

CLINICAL CHEMISTRY

Clinical Chemistry Controls

Clinical chemistry controls are vital for ensuring the accuracy, reliability, and validity of laboratory tests that analyze bodily fluids, such as blood and urine. These controls, which include both positive and negative samples with known concentrations of analytes, help validate the performance of diagnostic assays and ensure that testing equipment and reagents are functioning correctly. By routinely using these controls, laboratories can detect any inconsistencies or errors in the testing process, thereby minimising the risk of false positives or negatives that could lead to misdiagnosis or inappropriate treatment.

The role of clinical chemistry controls is particularly important in maintaining quality assurance in laboratory settings. They help ensure that the results are consistent and reproducible across different tests and patient samples, supporting accurate clinical decision-making. In critical situations, such as emergency medicine or monitoring chronic conditions, reliable laboratory data is essential for guiding treatment plans and assessing patient outcomes. Overall, clinical chemistry controls are integral to enhancing the overall quality of healthcare by providing dependable diagnostic information that informs patient management and care strategies.

The Fortress clinical chemistry range of controls are suitable for a range of clinical chemistry analysers, offering flexibility for your laboratory. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Featured Product

Human Assayed Controls

Multi-Analyte Human Assayed Controls are essential tools in clinical laboratories for ensuring the accuracy and reliability of diagnostic tests. These controls contain a blend of multiple analytes—such as hormones, proteins, and other biomarkers—mimicking human samples.

They are used to validate and monitor the performance of assays, which are tests designed to measure the presence or concentration of specific substances in a sample. By incorporating a range of analytes, these controls help laboratories simultaneously assess the precision and accuracy of various diagnostic assays under a single test run. This comprehensive approach not only enhances the efficiency of quality control procedures but also ensures consistency in test results, ultimately contributing to better patient care by maintaining high standards in laboratory diagnostics.

Why Choose Fortress Human Assayed Controls?

- **Human serum based:** Same matrix as samples.
- **0.2µ filtered:** Helps remove particulate contaminants and potential microbial contaminants, leading to more accurate and reproducible outcomes in various assays.
- **Lyophilised format:** Fortress Human Assayed Controls are stable to expiry at 2-8°C.
- **Method based values** with reference traceability provided.
- **Custom levels tailored to specific requirments available:** Adaptable to perfectly suit unique experimental conditions, analytical needs, and regulatory standards.
- **Reconstituted stability** of 7 days at 2-8°C, or 4 weeks at -20°C.

Analytes

Enzymes
Alkaline Phosphatase
ALT (GPT)
Amylase
AST (GOT)
Cholinesterase
CK (Total)
Gamma GT
GLDH
HBDH
LDH
Lipase
Pancreatic Amylase
Total Acid Phosphatase
Prostatic Acid-Phosphatase
Total Amylase

Substrates
Albumin
APO A1
APO B
Bile Acids
Bilirubin Direct
Bilirubin Total
Calcium
Cholesterol
Copper
Creatinine
D3- Hyrdroxybutyrate
Glucose
HDL Cholesterol
IGA
IGG
IGM
Iron
Iron/TIBC
Inorganic Phosphorous
LDL Cholesterol
NEFA
Osmolality
Total Protein
Transferrin
Triglycerides
UIBC
Urea
Uric Acid
Zinc

Electrolytes
Bicarbonate
Chloride
Lithium
Magnesium
Potassium
Sodium

Immunoassays
Cortisol
Folate
FT3
FT4
Total T3
Total T4
Total PSA
TSH
Vitamin B12

Drugs
Digoxin
Gentamicin
Paracetamol
Salicylate
Theophyline
Tobramycin

Description	Size	Cat No.	Type
Human Assayed Control (Level 1)	10 x 5ml	BXC0312A	Lyo.
Human Assayed Control (Level 2)	10 x 5ml	BXC0312B	Lyo.
Human Assayed Control (Level 1)	5 x 5ml	BXC0312C	Lyo.
Human Assayed Control (Level 2)	5 x 5ml	BXC0312D	Lyo.
Human Assayed Control (Level 1)	1 x 5ml	BXC0312E	Lyo.
Human Assayed Control (Level 2)	1 x 5ml	BXC0312F	Lyo.

GenChem UltraQC TR

Analytes

Alkaline Phosphatase
Albumin
Alkaline Phosphatase
Alpha-1-Acid Glycoprotein
Alpha-1-Antitrypsin
Alpha-Fetoprotein
ALT (GPT)
Amylase (Pancreatic)
Amylase (Total)
Apo-A1
Apo-B
AST (GOT)
Beta-2-Macroglobulin
Bicarbonate
Bile Acids
Bilirubin, Direct
Bilirubin, Total
C-Reactive Protein
Ceruloplasmin
Calcium
Carcinoembryonic Antigen (CEA)
Chloride
Cholesterol
Cholinesterase
CK-NAC
Complement C3
Complement C4
Copper
Cortisol
Creatinine
D3-Hydroxybutyrate
DHEA-S
Ethanol (alcohol)
Ferritin
Folate
Free T3
Free T4
FSH
Gamma-GT
GLDH
Glucose
α-HBDH
Iron
Haptoglobin
HDL Cholesterol (Direct)
IgA
IgE
IgG
IgM
Lactate
LDH LACTATE DEHYDROGENASE
LDL Cholesterol Direct
Leutinising Hormone (LH)
Lipase
Lipoprotein (a)
Lithium
Magnesium
Myoglobin
Osmolality
Phosphate Inorganic
Potassium
Prealbumin
Progesterone
Prolactin
Protein, Total
PSA Total
Sodium
T Uptake
Testosterone
TSH
TIBC
Total Beta hCG
Total T3
Total T4
Transferrin
Triglycerides
Troponin T
UIBC
Urea
Uric Acid
Vitamin B12
Zinc

Description	Size	Cat No.	Type
Liquid Assayed Chemistry Control (Level-1)	6 x 5 ml	BXC0365A	**LS (Frozen).**
Liquid Assayed Chemistry Control (Level-2)	6 x 5 ml	BXC0365B	LS (Frozen)
Liquid Assayed Chemistry Control (Level-3)	6 x 5 ml	BXC0365C	**LS (Frozen)**

Calibration Serum

- Approximately 40 parameters are value assigned by reference laboratories in Europe.
- Method based values with reference traceability provided.
- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8 °C, or 4 weeks at -20 °C.

Analytes

Enzymes		Substrates	Electrolytes
ALP	Pancreatic Amylase	Albumin	Chloride
ALT (GPT)	Prostatic Phosphatase	Bicarbonate	Lithium
Total Amylase		Bile Acids	Magnesium
AST (GOT)		Bilirubin Direct	Potassium
Cholinesterase		Bilirubin Total	Osmolality
CK NAC		Calcium	Sodium
Gamma GT		Cholesterol	
GLDH		Copper	
HBDH		Creatinine	
LDH		D3- Hydroxybutyrate	
Lipase		Glucose	
		HDL Cholesterol	
		Iron	
		Iron/TIBC	
		Inorganic Phosphorous	
		Lactate	
		LDL Cholesterol	
		Total Protein	
		Triglycerides	
		Urea	
		Uric Acid	
		Zinc	

Description	Size	Cat No.	Type
Calibration Serum	1 x 3 ml	BXC0321K	Lyo.
Calibration Serum	5 x 3 ml	BXC0321L	Lyo.
Calibration Serum	10 x 3 ml	BXC0321M	Lyo.
Calibration Serum Normal	3 x 5 ml	BXC0321A	Lyo.
Calibration Serum Normal	5 x 5 ml	BXC0321B	Lyo.
Calibration Serum Normal	10 x 5 ml	BXC0321C	Lyo.
Calibration Serum Elevated	3 x 5 ml	BXC0321D	Lyo.
Calibration Serum Elevated	5 x 5 ml	BXC0321E	Lyo.
Calibration Serum Elevated	10 x 5 ml	BXC0321F	Lyo.

ADA Calibrators & Controls

- Liquid Stable version (Ready-to-use) stable to expiry at 2-8 °C & Open vial stability of 30 days, at 2-8°C.
- Lyophilised version reconstituted stability of 30 days at 2-8°C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
ADA Calibrator	1 x 1 ml	BXC0209A	LS
ADA Control (Level 1)	1 x 1 ml	BXC0210A	LS
ADA Control (Level 2)	1 x 1 ml	BXC0216A	LS
ADA Calibrator	1 x 1 ml	BXC0217A	Lyo.
ADA Control (Level 1)	1 x 1 ml	BXC0218A	Lyo.
ADA Control (Level 2)	1 x 1 ml	BXC0219A	Lyo.

Alcohol, Ammonia, Carbonate Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 24 hours at 2-8°C.

Description	Size	Cat No.	Type
Alcohol, Ammonia, Carbonate Calibrator	1 x 2 ml	BXC0492A	LS
Alcohol, Ammonia, Carbonate Control (Level 1)	1 x 2 ml	BXC0493A	LS
Alcohol, Ammonia, Carbonate Control (Level 2)	1 x 2 ml	BXC0494A	LS

Aldolase Calibrators & Controls

- Lyophilised product with a 3 year shelf life when stored at 2-8 °C.
- Reconstituted stability of 5 days at 2-8°C.
- Values assigned by reference laboratories in Europe

Description	Size	Cat No.	Type
Aldolase Calibrator	3 x 1 ml	BXC0394A	Lyo.
Aldolase Control Elevated	3 x 1 ml	BXC0393A	Lyo.
Aldolase Control Normal	3 x 1 ml	BXC0392A	Lyo.

Alpha-1-Acid Glycoprotein Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Alpha-1-Acid Glycoprotein Calibrator	2 x 1 ml	BXC0892A	LS
Alpha-1-Acid Glycoprotein Control	2 x 1 ml	BXC0891A	LS

Alpha-1-Antitrypsin Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Details	Size	Cat No.	Type
Alpha-1-Antitrypsin Calibrator	Immunoturbidimetric	1 x 2 ml	BXC0711A	LS
Alpha-1-Antitrypsin Control (Level 1 & Level 2)	**Immunoturbidimetric**	2 x 1 x 2ml	BXC0712A	LS
Alpha-1-Microglobulin Calibrator		1 x 1 ml	BXC0887A	LS
Alpha-1-Microglobulin Control (Level 1 & Level 2)		2 x 1 x 1ml	BXC0889A	LS

Aluminium Calibrators & Controls

- Liquid Stable (Ready-to-Use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Aluminium Control Level 1	1 x 1 ml	BXC0696A	LS
Aluminium Control Level 2	1 x 1 ml	BXC0697A	LS
Aluminium Control Level 3	1 x 1 ml	BXC0698A	LS

Ammonia Controls & Calibrators

- Liquid stable Calibrator and Control with a 2 year shelf life.
- Values are assigned in house using Enzymatic UV method.
- Storage at 2-8 °C.
- One month open vial stability at 2-8 °C.

Description	Size	Cat No.	Type
Ammonia Calibrator	3 x 2 ml	BXC0373A	LS
Ammonia Control High	3 x 2 ml	BXC0375A	LS
Ammonia Control Low	3 x 2 ml	BXC0374A	LS

Angiotensin Converting Enzyme (ACE) Controls & Calibrators

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.

Description	Size	Cat No.	Type
Angiotensin Converting Enzyme (ACE) Calibrator	3 x 1 ml	BXC0177A	Lyo.
Angiotensin Converting Enzyme (ACE) Control (Level 1)	3 x 1 ml	BXC0178A	Lyo.
Angiotensin Converting Enzyme (ACE) Control (Level 2)	3 x 1 ml	BXC0179A	Lyo.

Anti-CCP Controls & Calibrators

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- When vial opened it must be used immediately, store at 2-8°C.

Description	Size	Cat No.	Type
Anti-CCP Calibrator	1 x 1 ml	BXC0379D	LS
Anti-CCP Calibrator Series	6 x 1 x 1ml	BXC0379B	LS
Anti-CCP Control Set	2 x 1 x 1ml	BXC0379C	LS

Anti-Mullerian Hormone (AMH) Calibrators & Control Set

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- When vial opened it must be used immediately, store at 2-8°C.

Description	Size	Cat No.	Type
Anti-Mullerian Hormone (AMH) Calibrators & Control Set	Calibrator Set: 2 x 1x0.5ml ; Control Set: 2x1x0.5ml	BXC0999A	LS

APO A1/B Calibrator Series

Description	Size	Cat No.	Type
APO A1/B Calibrator Series	6 x 1 x 1 ml	BXC0413A	LS.

ASO & RF Control

Description	Size	Cat No.	Type
ASO & RF Control	3 x 1ml	BXC0640A	LS.

ASO (Single Point) Calibrators

- Values are assigned by in house methods and instruments
- 100% human material designed for matrix conformity.
- The liquid stable ASO Single point calibrator has a shelf life of 2 years when stored at 2-8 °C.
- Once opened the calibrator is stable for a period of 30 days when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
ASO (Single Point) Calibrator	1 x 1 ml	BXC0323A	LS
ASO (Single Point) Calibrator	3 x 1 ml	BXC0323B	LS

ASO, CRP, RF Control

- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The values are assigned in European Reference Laboratories.
- 100% Human serum designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.
- This material is presented in a liquid stable format and is stable up to expiry at 2-8 °C.

Description	Size	Cat No.	Type
ASO, CRP, RF Control	3 x 1 ml	BXC0645A	LS

Beta-2- Microglobulin Calibrators & Controls

Description	Size	Cat No.	Type
Beta-2- Microglobulin Calibrator	1 x 1 ml	BXC0647A	LS
Beta-2- Microglobulin Control (Level 1 & Level 2)	1 x 2 x 1 ml	BXC0648A	LS

Bile Acid Controls & Calibrators

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Bile Acid Calibrator	1 x 1 ml	BXC0582A	LS
Bile Acid Control (Level 1)	2 x 1 x 1 ml	BXC0583A	LS
Bile Acid Control (Level 2)	2 x 1 x 1 ml	BXC0584A	LS

Blood Alcohol Controls & Calibrators

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- When vial opened it must be used immediately, store at 2-8°C.

Description	Size	Cat No.	Type
Blood Alcohol Calibrator	1 x 2 ml	BXC0488A	LS
Blood Alcohol Control (Level 1)	1 x 2 ml	BXC0489A	LS
Blood Alcohol Control (Level 2)	1 x 2 ml	BXC0490A	LS

Bilirubin Controls & Calibrators

- Human Serum based Controls simulating the human serum matrix.
- Values assigned by reference laboratories in Europe.
- Typical levels: Total Bilirubin around 350 umol/l (around 20 mg/dl) & Direct Bilirubin around 100 umol/l (around 6.0 mg/dl).
- Lyophilised product and Liquid Stable version ready-to-use stable up to expiry at 2-8 °C.
- Storage at 2-8 °C.
- Reconstituted stability of 5 days at 2-8 °C.
- Values for Total and Direct Bilirubin.
- Ideal for laboratories measuring Neonatal Bilirubin.
- Open vial stability for liquid 3 months.

Description	Size	Cat No.	Type
Bilirubin Calibrator	3 x 1ml	BXC0319A	Lyo.
Bilirubin Control (Elevated)	1 x 1ml	BXC0318A	Lyo.
Bilirubin Control (Elevated)	5 x 1ml	BXC0318B	Lyo.
Bilirubin Calibrator	2 x 1ml	BXC0303A	LS
Bilirubin Control Set	2 x 1 x 1ml	BXC0304A	LS
Bilirubin Control Set, Paediatric	2 x 1 x 1ml	BXC0305A	LS
Bilirubin Control (Normal)	1 x 1ml	BXC0306A	LS
Bilirubin Control (Normal)	3 x 1ml	BXC0306B	LS
Bilirubin Control (Elevated)	1 x 1 ml	BXC0307A	LS
Bilirubin Control (Elevated)	3 x 1 ml	BXC0307B	LS

Citrate (Urinary) Calibrators & Controls

- The controls are presented in a Liquid format and are stable up to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Citrate (Urinary) Calibrator [200mg/L]	2 x 1 ml	BXC0136A	LS
Citrate (Urinary) Control (Level 1) [50mg/L]	2 x 1 ml	BXC0137A	LS
Citrate (Urinary) Control (Level 2) [600mg/L]	2 x 1 ml	BXC0139A	LS

CO_2 (Bicarbonate) Controls & Calibrators

- Values are assigned by in house methods using Enzymatic CO2 kits.
- The CO2 (Bicarbonate) calibrator is intended for calibrating the Fortress CO2 (Bicarbonate) kit.
- CO2 (Bicarbonate) Calibrator & Controls are Liquid Stable.
- Stable to expiry at 2-8 °C.
- Five hours open vial stability at 2-8 °C.

Description	Size	Cat No.	Type
CO2 (Bicarbonate) Calibrator	3 x 2 ml	BXC0155A	LS
CO2 (Bicarbonate) Control Low	3 x 2 ml	BXC0156A	LS
CO2 (Bicarbonate) Control High	3 x 2 ml	BXC0157A	LS

CSF Controls

- Human CSF based controls.
- Method based values with reference traceability provided.
- Liquid stable (Ready-to-Use) - Stable to expiry at 2-8 °C.
- Once opened, the control is stable for a period of 30 days when stored at 2-8 °C without contamination.

Analytes

Proteins	Electrolytes	Substrates
IgA	Chloride	Albumin
IgG	Lactate	Glucose
IgM	Sodium	
Total Protein		

Description	Size	Cat No.	Type
CSF Control (Level 1)	1 x 1 ml	BXC0673A	LS
CSF Control (Level 2)	1 x 1 ml	BXC0673B	LS

CSF Diff Control

Description	Size	Cat No.	Type
CSF Diff Control (Level 1)	5 x 2 ml	BXC0080A	LS.
CSF Diff Control (Level 2)	5 x 2 ml	BXC0081A	LS.
CSF Diff Control (Level 3)	5 x 2 ml	BXC0082A	LS.

CRP Controls & Calibrators

- Fortress CRP controls are intended for monitoring accuracy and precision of CRP turbidimetric, Immunoturbidimetric and Nephelometric assays.
- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The values are assigned in European Reference Laboratories.
- 100% Human serum designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
CRP (Single Point) Calibrator	3 x 1 ml	BXC0324A	LS
CRP (Multi Point) Calibrator	6 x 1 x 1 ml	BXC0324B	LS
CRP (Ultra Sensitive) Low Control	3 x 1 ml	BXC0325A	LS
CRP (Ultra Sensitive) Standard Set	5 x 1 x 0.5 ml	BXC0327A	LS
CRP Control (Level 1)	5 x 1 ml	BXC0326A	LS
CRP Control (Level 2)	5 x 1 ml	BXC0326B	LS
CRP Control Set	2 x 1 x 1 ml	BXC0326C	LS

Cyanmethaemoglobin Standard Set

- Typical concentrations 8,10,12,15,18 g/dL.
- The standard set comprises of 5 standards.
- Values are assigned using in house methods.
- Store the standard set at 2-8 °C. The Standard set is stable up to expiry when stored unopened at 2-8 °C.
- Once opened the standard set is stable for a period of 1 month when stored at 2-8°C without contamination.
- Do not freeze

Description	Size	Cat No.	Type
Cyanmethaemoglobin Standard Set	5 x 1 x 10 ml	BXC0483A	LS

Cystatin C Controls & Calibrators

- Values are assigned using in house methods.
- These controls and calibrators are supplied in liquid stable format with a shelf life of 2 years when stored at 2-8 °C.
- When opened and stored at 2-8 °C, without contamination, the controls and calibrators are stable for a period of 1 month.
- Mix gently before use.
- The calibrator set and controls are liquid stable.
- Human serum based to ensure matrix compatibility.
- Do not freeze.

Description	Size	Cat No.	Type
Cystatin C Calibrator Set (6 Levels)	6 x 1 ml	BXC0334A	LS
Cystatin C Control (Level 1)	2 x 1 ml	BXC0333A	LS
Cystatin C Control (Level 2)	2 x 1 ml	BXC0333B	LS

D3-Hydroxybutyrate Controls & Calibrators

- Lyophylised product stable to expiry at 2-8 °C.
- Reconstituted Stability of 7 Days at 2-8°C.

Description	Size	Cat No.	Type
D3-Hydroxybutyrate Calibrator	1 x 3 ml	BXC0544A	Lyo
D3-Hydroxybutyrate Control (Level 1)	1 x 5 ml	BXC0543A	Lyo
D3-Hydroxybutyrate Control (Level 2)	1 x 5 ml	BXC0543B	Lyo

D-Dimer Calibrators & Controls

- Liquid Stable (Ready-to-use)
- Prepared from human serum.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
D-Dimer Calibrator Set (5 Levels)	5 x 1 ml	BXC0788A	LS
D-Dimer Control Set (Level 1 & Level 2)	5 x 1 ml	BXC0789A	LS

ESR Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
ESR Control (Level 1)	2 x 10 ml	BXC0631A	LS
ESR Control (Level 2)	2 x 10 ml	BXC0632A	LS

Ferritin Controls & Calibrators

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Ferritin Calibrator	1 x 1 ml	BXC0445A	LS
Ferritin Calibrator Set	6 x 1 x 1 ml	BXC0445B	LS
Ferritin Control (Level 1)	3 x 1 ml	BXC0443A	LS
Ferritin Control (Level 2)	3 x 1 ml	BXC0444A	LS

Fructosamine Controls & Calibrators

- Values are assigned using both in house and reference laboratory values.
- 100% Human Serum designed for matrix conformity.

Description		Size	Cat No.	Type
Fructosamine Calibrator		1 x 1 ml	BXC0592A	LS
Fructosamine Control (Level 1)	*Low*	3 x 1 ml	BXC0593A	LS
Fructosamine Control (Level 2)	*High*	3 x 1 ml	BXC0594A	LS

G-6-PDH Controls

- Values assigned by reference Laboratories in Europe.
- Stable to expiry at 2-8 °C.
- Reconstituted stability of 5 days at 2-8 °C.
- Lypholised for enhanced stability.
- Typical Levels:
  G-6-PDH Deficient Control : 100 - 200 U/l
  G-6-PDH Normal Control : 900 - 1400 U/l

Description	Size	Cat No.	Type
G-6-PDH Control Normal	3 x 1.0ml	BXC0573B	Lyo.
G-6-PDH Control Intermediate	1 x 1 ml	BXC0572B	Lyo.
G-6-PDH Control Deficient	3 x 1.0ml	BXC0572B	Lyo.

Glucose-Fructose Control

Description	Size	Cat No.	Type
Glucose-Fructose Control (Level 1)	TBC	BXC0099A	LS
Glucose-Fructose Control (Level 2)	TBC	BXC0099B	LS

Glycerol Control

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Glycerol Control	2 x 5 ml	BXC0278A	LS

HDL/LDL Calibrators

- Fortress HDL/LDL Cholesterol Calibrator is presented in a Lyophilised format for enhanced stability. Stable up to expiry at 2-8 °C.
- Once opened and reconstituted the control is stable for 7 days at 2-8 °C, or 30 days at -20 °C.
- 100% human material designed for matrix conformity.

Analytes	
HDL Cholesterol (Direct)	LDL Cholesterol (Direct)

Description	Size	Cat No.	Type
HDL/LDL Calibrator	5 x 3 ml	BXC0315C	Lyo.
HDL/LDL Calibrator	3 x 1 ml	BXC0315D	LS.
HDL/LDL Calibrator	1 x 1 ml	BXC0315E	LS.
HDL/LDL Calibrator	3 x 1 ml	BXC0315F	Lyo.

IgE Calibrators & Controls

- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.
- Reconstituted stability of 30 days at -20°C.

Description	Size	Cat No.	Type
IgE Calibrator	1 x 1 ml	BXC0752A	Lyo.
IgE Control Set (Level 1 & Level 2)	2 x 2 x 1 ml	BXC0753A	Lyo.

Immunoglobulin Calibrator

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.
- Prepared from Human Serum.

Analytes		
IgA	IgG	IgM

Description	Size	Cat No.	Type
Immunoglobulin Calibrator	3 x 1 ml	BXC0040A	LS

Lipase Calibrator

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Lipase Calibrator	3 x 1 ml	BXC0510A	LS

Lipoprotein (a) Calibrators & Controls

- The controls are supplied in two levels.
- 100% Human serum designed for matrix conformity.
- Liquid stable controls and calibrators stable up to expiry at 2-8 °C.
- Once opened the calibrator and controls are stable for a period of 30 days when stored at 2-8 °C.
- Lipoprotein Low and High controls typically have the following the levels:
  Lipoprotein Control Low around 20mg/dl.
  Lipoprotein Control High around 50mg/dl.
- Do not freeze.

Description	Size	Cat No.	Type
Lipoprotein (a) Calibrator	1 x 1 ml	BXC0134A	LS
Lipoprotein (a) Control Low	1 x 1 ml	BXC0131A	LS
Lipoprotein (a) Control High	1 x 1 ml	BXC0133A	LS

Lithium Calibrator

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Lithium Calibrator (3000 mmol/L)	2 x 1 ml	BXC0106A	LS
Lithium Calibrator	1 x 2 x 1 ml	BXC0141A	LS

Methanol Calibrators & Controls

Description	Size	Cat No.	Type
Methanol Calibrator	1 x 2ml	BXC0497A	LS
Methanol Control (Level 1)	1 x 2ml	BXC0498A	LS
Methanol Control (Level 2)	1 x 2ml	BXC0499A	LS

Microalbumin Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Microalbumin Calibrator Series	5 x 1 ml	BXC0329A	LS
Microalbumin Control (Level 1)	2 x 1 ml	BXC0328A	LS
Microalbumin Control (Level 2)	5 x 1 ml	BXC0328B	LS

Myoglobin Calibrators & Controls

- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 30 days at 2-8°C.

Description	Size	Cat No.	Type
Myoglobin Calibrator Series	1 x 1 x 0.5ml	BXC0486A	Lyo.
Myoglobin Control	1 x 0.5ml	BXC0487A	Lyo.

Oxalate Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Oxalate (Urinary) Calibrator [0.5 mmol/L]	1 x 5ml	BXC0147A	LS
Oxalate (Urinary) Control (Level 1) [0.2 mmol/L]	1 x 5ml	BXC0148A	LS
Oxalate (Urinary) Control (Level 2) [0.7 mmol/L]	1 x 5ml	BXC0149A	LS

RF (Multi-Point) Calibrators

- This Calibrator is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The Calibrator is presented as a single level calibrator which can be diluted as necessary for calibrating RF Turbidimetric Assays.
- Values are assigned by in house methods and instruments.
- 100% human material designed for matrix conformity.
- Once opened the control is stable for a period of 30 days. when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
RF (Multi-Point) Calibrator	1 x 2ml	BXC0612A	LS
RF (Multi-Point) Calibrator	3 x 2ml	BXC0612B	LS

TIBC Calibrator

- Lyophilised Stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
TIBC Calibrator (Single Level)	2 x 1 ml	BXC0238A	Lyo.

Zinc & Copper Calibrator

- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 30 days at 2-8°C.

Description	Size	Cat No.	Type
Zinc & Copper Calibrator	2 x 1 ml	BXC0463A	Lyo.

7

SECTION 7

COAGULATION/ HAEMOSTASIS

Coagulation / Haemostasis Controls

Coagulation and haemostasis controls are essential in diagnostics for accurately assessing a patient's ability to form blood clots and maintain haemostasis. These controls include standardized samples with known coagulation properties used to validate laboratory tests that measure parameters like prothrombin time (PT), activated partial thromboplastin time (aPTT), and platelet counts. By employing these controls, laboratories can ensure the accuracy and reliability of test results, which are critical for diagnosing bleeding disorders, monitoring anticoagulant therapy, and guiding treatment decisions in various clinical scenarios, such as surgery or trauma care.

The importance of coagulation and haemostasis controls extends to maintaining quality assurance within laboratory settings, allowing for consistent and reproducible results across different testing environments. Reliable coagulation diagnostics are crucial for preventing complications related to abnormal bleeding or thrombosis, ultimately improving patient outcomes. Regular use of these controls helps identify any technical issues with reagents or instrumentation, ensuring that healthcare providers have accurate information to make informed decisions regarding patient management and treatment strategies.

The Fortress Haemostasis Plasma Controls are provided in a lyophilised format for enhanced stability and are 100% human serum based to negate matrix effects. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Plasma Calibrator & Controls

For Coagulation Series only, PT, aPTT, Fibrinogen, Thrombin Time

- The calibrator and controls are supplied in lyophilised format and stable to expiry when stored at 2-8 °C.
- Once opened and reconstituted, the calibrators and controls are stable for a period of 24 hours at 2-8 °C.
- 100% Human plasma to mimic human samples.
- Do not Freeze

Description	Size	Cat No.	Type
Plasma Calibrator	5 x 1 ml	COAG125A	Lyo.
Plasma Control (Level 1)	1 x 1 ml	COAG108A	Lyo.
Plasma Control (Level 1)	5 x 1 ml	COAG108B	Lyo.
Plasma Control (Level 2)	1 x 1 ml	COAG109A	Lyo.
Plasma Control (Level 2)	5 x 1 ml	COAG109B	Lyo.
Plasma Control Set (Level 1 & Level 2)	2 x 5 x 1 ml	COAG112A	Lyo.

SECTION 8

CUSTOMISED QUALITY CONTROLS

Customised Quality Controls

Fortress Diagnostics has extensive experience and expertise in the production of customised quality controls for EQA programmes, and manufaturing custom made QC solutions for laboratories throughout the global market.

Over 200 analytes can be customized in the required matrix, with concentrations, levels and volumes. The following list of quality controls can be customised by Fortress Diagnostics:

- Antioxidant Controls
- Clinical Chemistry
- Cardiac Controls
- Haemostasis Controls
- Diabetes Controls
- Immunoassay Controls
- Immunology / Specific Protein Controls
- Lipids
- Tumor Markers
- TDM and DOA
- Urine Assayed
- Urine Strip Controls

Why Customise Fortress Controls?

Cost Effective
Fortress Diagnostics operate throughout the global market. Over 200 analytes can be customized in the required matrix, with concentrations, levels and volumes, leading to cost savings.

Customised
The customised advantage helps in getting the laboratory's requirement in analytes and levels in one control. High usage controls can be manufactured in higher volumes.

Quality
All controls are CE marked and manufactured according to the ISO13485 specifications.

Choice of Matrix
Controls are available in different matrices, like Serum,Plasma, Whole Blood, Urine and aqueous material.

Fast Lead Time
The total order, testing and manufacturing time is 60 days. This cuts the ordering of customised control to half the time that is required by other companies to manufacture customised controls.

Our Process

Time Frame of 90 Days

1. Customer Provides a Specification
2. Specification Reviewed & Agreed
3. Customer Places Order
4. Pilot Samples Sent to Customer
5. Customer Returns Pilot Results (2 Weeks)
6. Manufacture of Controls
7. Despatch of Samples to Customer for Approval/Testing
8. Customer Accepts Material
9. Material is Labelled, Packaged & Despatched to Customer

SECTION 9

DIABETES

Diabetes

Diabetes controls are crucial in diagnostics for ensuring the accuracy and reliability of tests that measure blood glucose levels and other related biomarkers, enabling timely diagnosis, effective monitoring of glycemic control, and informed treatment decisions to manage diabetes and prevent complications.

The Fortress Diabetes Controls are lyophilised for enhanced stability, and are ideal for both clinical and research use. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Fructosamine Controls & Calibrators

- Values are assigned using both in house and reference laboratory values.
- 100% Human Serum designed for matrix conformity.
- Lyophilised Controls and Calibrators stable to expiry at 2-8 °C.
- Reconstituted stability of 28 days at -20 °C.

Description	Size	Cat No.	Type
Fructosamine Calibrator	1 x 1 ml	BXC0592A	LS
Fructosamine Control (Level 1)	3 x 1 ml	BXC0593A	LS
Fructosamine Control (Level 2)	3 x 1 ml	BXC0594A	LS

HbA1c Calibrators

- 100% human blood designed for matrix conformity.
- The Calibrator is supplied in a Lyophilised format with a 2 year shelf life when stored at 2-8 °C.
- Reconstituted stability of 5 days at 2-8 °C.
- HbA1c Calibrator Set: Typical levels:
  HbA1c Calibrator Level 1: 5-6%
  HbA1c Calibrator Level 2: 11-13%
- Do not freeze.

Description		Size	Cat No.	Type
HbA1c Calibrator Series	*For use with BXC0670*	2 x 1 x 0.5 ml	BXC0668A	Lyo.
HbA1c Calibrator Set (2 Levels)		2 x 1 x 0.5 ml	BXC0678A	Lyo.
HbA1c (HPLC) Calibrator Set (2 Levels)	*For HPLC Method Only*	2 x 1 x 0.25 ml	BXC0780A	Lyo.

HbA1c Controls

- Controls are supplied in a Lyophilised format stable to expiry at 2-8 °C.
- The controls are value assigned in European Reference Laboratories.
- The Control carries values for methods such as Immunoturbidimetry, Micro-column, HPLC and Enzymatic HbA1c & point of care devices.
- Values are provided for both NGSP DCCT and IFCC methodologies.

Description		Size	Cat No.	Type
HbA1c (HPLC) Control Set (2 Levels)	*For HPLC Method Only*	2 x 1 x 0.5 ml	BXC0779A	Lyo.
HbA1c Control High		2 x 0.5 ml	BXC0677A	Lyo.
HbA1c Control Low		2 x 0.5 ml	BXC0676A	Lyo.
HbA1c Control Set		2 x 2 x 0.5 ml	BXC0675A	Lyo.
HbA1c Control Set (2 Levels)	*For use with BXC0670*	2 x 1 x 0.5 ml	BXC0669A	Lyo.

Thalassaemia (Alpha & Beta) Control

For use on all major systems and methods including HPLC, Immunoassay, HbA2, HbF, HbS.

- Designed for monitoring accuracy and precision of Haemoglobin Variants measurements associated with Thalassaemia.
- The controls are supplied in a Lyophilised format stable up to expiry at 2-8 °C.
- 100% Human blood.

Description	Size	Cat No.	Type
Thalassaemia (Alpha & Beta) Control (Level 1)	2 x 0.5 ml	BXC0665A	Lyo.
Thalassaemia (Alpha & Beta) Control (Level 2)	2 x 0.5 ml	BXC0665B	Lyo.

10

SECTION 10

DRUGS OF ABUSE

Drugs of Abuse

Drugs of abuse controls are vital in diagnostics for accurately detecting and monitoring the use of illicit substances, prescription medications, and other psychoactive drugs in patients. These controls consist of standardized samples with known concentrations of specific drugs or their metabolites, used to validate the performance of drug testing assays, such as immunoassays and gas chromatography. By implementing these controls, laboratories ensure the reliability and accuracy of test results, which are crucial for effective patient management in various settings, including addiction treatment, pain management, and legal cases.

The role of drugs of abuse controls extends beyond accuracy; they are essential for maintaining quality assurance in drug testing laboratories. Regular use of these controls helps identify potential errors, such as reagent degradation or instrument malfunction, thus preventing false positives or negatives that could impact patient care or legal outcomes. Moreover, reliable drug testing plays a critical role in public health initiatives, workplace drug screening, and monitoring compliance with treatment programs, ultimately contributing to safer and more effective healthcare practices.

The Fortress Drugs of Abuse Controls, are available in a liquid stable (ready-to-use) format for convenience and ease-of-use, offer an independent assessment of performance for Drugs of Abuse Immunoassays, and are suitable for semi-quantitative and quantitative use. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Drugs of Abuse Controls

- Fortress Drugs of Abuse controls are intended for checking assay performance of Drugs of Abuse Immunoassays.
- These controls are urine based and have concentrations 25% above and below the SAMHSA (Substance Abuse And Mental Health Services Administration) recommended cut off levels.
- Liquid stable controls (ready-to-use).
- Suitable for semi-quantitative and quantitative use.
- 2 years shelf life.
- 30 days open vial stability when stored at 2-8 °C.

Typical Values in Drugs of Abuse Control Levels

Analyte	DOA Level (ng/ml)	DOA Level 2 (ng/ml)	DOA Level 3 (ng/ml)
Amphetamines	600	900	1350
Barbiturates	100	400	1000
Benzodiazepines	102	250	600
Cannabinoids	50	90	150
Cocaine	300	275	400
LSD	0.05	0.1	0.2
Methadone	200	300	800
Opiates	1000	1500	6000
Phencyclidine	15	25	100
Propoxyphene	60	100	-
TCA	50	90	180

Analytes

Amphetamines Barbiturates Benzodiazepines	Cannabinoids Cocaine TCA	LSD Methadone Opiates	Phencyclidine Propoxyphene

Description	Size	Cat No.	Type
Drugs of Abuse Control (Level 1)	10 x 10 ml	BXC0784A	LS
Drugs of Abuse Control (Level 1)	10 x 3 ml	BXC0784B	LS
Drugs of Abuse Control (Level 2)	10 x 10 ml	BXC0785A	LS
Drugs of Abuse Control (Level 2)	10 x 3 ml	BXC0785B	LS
Drugs of Abuse Control (Level 3)	10 x 10 ml	BXC0786A	LS
Drugs of Abuse Control (Level 3)	10 x 3 ml	BXC0786B	LS

11

SECTION 11

HAEMATOLOGY

Haematology

Hematology controls are crucial in diagnostics for ensuring the accuracy and reliability of tests that analyse blood components, including red and white blood cells, platelets, and hemoglobin levels. These controls consist of standardised samples with known cell counts and characteristics, used to validate laboratory instruments and procedures for tests like complete blood counts (CBC) and coagulation profiles. By implementing these controls, laboratories can detect any discrepancies in test results, which is essential for diagnosing conditions such as anemia, leukemia, and other blood disorders, as well as for monitoring patient response to treatment.

The role of hematology controls extends to maintaining quality assurance within laboratory settings, allowing for consistent and reproducible results across different testing environments. Reliable hematology diagnostics are vital for guiding clinical decision-making and ensuring appropriate patient management. Regular use of these controls helps identify potential issues with reagents or equipment, thereby minimising the risk of misdiagnosis or inappropriate treatment. Overall, hematology controls play a significant role in enhancing the quality of healthcare by providing accurate diagnostic information that informs treatment strategies and improves patient outcomes.

The Fortress Haematology Controls combines 14 analytes, covering the most commonly tested blood profiles in a single control. With 3-part differential technology an unbiased, independent assessment of analytical performance. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Haematology Controls & Calibrators

- Fortress Haematology calibrators are intended for calibrating 3 part differential analysers.
- The controls are intended for monitoring accuracy and precision in 3 part differential analysers.
- The product is supplied as a liquid stable material with storage at 2-8 °C.
- When opened, this product is stable for a period of 21 days, when stored at 2-8 °C.

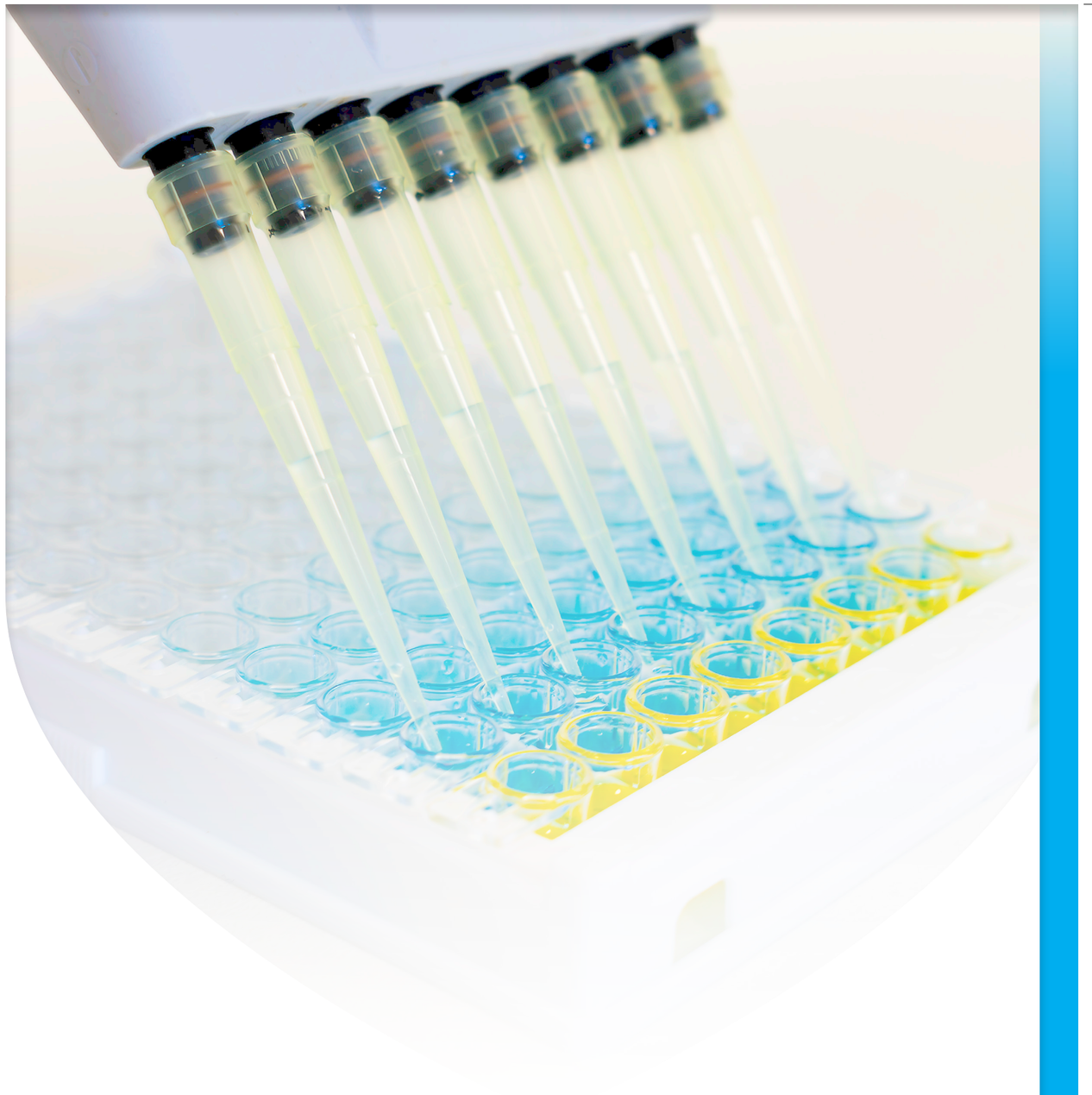
Values Available for the Following Analysers:

Abbott Cell Dyn 1600/1700/1800, ABX Micros 60, 80/80XL, Coulter AcT 5 Diff, Coulter ACT Diff/ACT Diff 3, Coulter MD Series, Coulter STKS/MAXM/HMX, Coulter T890/T660/T540, Danam DATACELL 16CP/I1800/18/18MS/18MS Plus, Siemens ADVIA 120/2120/1210i, Sysmex XE2100/XE5000/XT1800i/XT2000i/XS1000i, Sysmex KX21/K1000, ERMA PCE210, Merck Medonic CA620, Mindray BC1800/BC3000/BC-3000CT/BC3200/BC3000 Plus/BC2600/BC2800, Nihon Kohden CELLTAC Alpha MEK 6318, MEK 6410K, Fortress CellDiff 3, Swelab AC920, Medonic CA610, Abacus Junior.

Analytes

Haemoglobin	MCV	RDW SD	Lymphocytes
HCT	MPV	Total RBC	Mid Cells
MCH	Platelets	Total WBC	
MCHC	RDW CV	Granulocytes	

Description	Size	Cat No.	Type
Haematology Calibrator	3 x 3 ml	HAEMC005	LS
Haematology Control (Level 1)	3 x 3 ml	HAEMC001	LS
Haematology Control (Level 2)	3 x 3 ml	HAEMC002	LS
Haematology Control (Level 3)	3 x 3 ml	HAEMC003	LS
Haematology Control (3 Levels)	3 x 3 x 3 ml	HAEMC004	LS



SECTION 12

IMMUNOASSAY/ INFECTIOUS DISEASES

Immunoassay

Immunoassay controls are essential in diagnostics for ensuring the accuracy and reliability of tests that detect and quantify specific proteins, hormones, drugs, and antibodies in biological samples. These controls consist of standardised samples with known concentrations of analytes, which are used to validate the performance of immunoassay methods such as enzyme-linked immunosorbent assays (ELISA) and radioimmunoassays. By incorporating these controls, laboratories can monitor assay precision, sensitivity, and specificity, thus minimising the risk of false-positive or false-negative results that could lead to incorrect diagnoses or inappropriate treatment decisions.

The role of immunoassay controls extends to maintaining quality assurance in laboratory operations, ensuring that test results are consistent and reproducible across different assays and testing platforms. Reliable immunoassay diagnostics are critical for guiding clinical decisions, such as monitoring hormone levels, diagnosing infectious diseases, and screening for autoimmune disorders. Regular use of these controls helps identify any technical issues with reagents, instrumentation, or assay protocols, ultimately supporting accurate and timely patient management. Overall, immunoassay controls significantly enhance the quality of healthcare by providing trustworthy diagnostic information that informs treatment strategies and improves patient outcomes.

The Fortress Immunoassay Controls Range have been designed to cover a variety of the most comprehensive markers, including: thyroid hormones, fertility hormones, tumour markers, growth deficiency, allergy, diabetes, anaemia and steroids. All Fortress controls in the Immunoassay range are manufactured from 100% human serum to negate matrix effects. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Immunoassay Controls

- Fortress Immunoassay Controls are intended for monitoring accuracy and precision.
- Controls are provided in a Lyophilised format stable up to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8 °C or 4 week at -20 °C.
- Values are assigned in European reference laboratories.
- 28 analytes.

Analytes

Thyroid
Hormones
Total T3
Total T4
Free T3
Free T4
TSH
T-uptake

Fertility Hormones
LH
FSH
Prolactin
HCG

Tumor Markers
CEA
AFP
PSA
fPSA

Cardiac Markers
Digoxin

Growth Deficiency
Human Growth Hormone

Allergy
IgE

Diabetes
C-peptide
Insulin

Anaemia
Ferritin

Steroids
17-OH
Progesterone
Cortisol
Unconjugated Estriol
Progesterone
Testosterone
DHEA-S

Description	Size	Cat No.	Type
Immunoassay Control (Level 1)	4 x 3 ml	BXC0363A	Lyo.
Immunoassay Control (Level 2)	4 x 3 ml	BXC0363B	Lyo.
Immunoassay Control (Level 3)	4 x 3 ml	BXC0363C	Lyo.
Immunoassay Tri-Level Control	3 x 4 x 3 ml	BXC0363D	Lyo.

Immunoassay Speciality

- Lypholised stable to expiry at 2-8 °C
- 100% Human serum
- Reconstituted stability of 7 days at 2-8 °C or 28 days stored at -20 °C.

Analytes

1-25 (OH) Vitamin D
Anti TG
Anti TP
C Peptide
IgF-I
Insulin
Oesteocalcin
PTH
Calcitonin

Description	Size	Cat No.	Type
Immunoassay Speciality (Level 1)	1 x 2 ml	BXC0364A	Lyo.
Immunoassay Speciality (Level 2)	1 x 2 ml	BXC0364B	Lyo.
Immunoassay Speciality (Level 3)	1 x 2 ml	BXC0364C	Lyo.
Immunoassay Speciality Tri-Level Control	3 x 1 x 2 ml	BXC0364D	Lyo.

Anti-Mullerian Hormone (AMH) Calibrators & Controls

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.
- Compatable with all AMH assays.

Description	Size	Cat No.	Type
Anti-Mullerian Hormone (AMH) Calibrators & Controls	Cal A: 1 x 0.5ml; Cal B-G: 6 x 0.5ml; Ctl L1: 1 x 0.5ml; Ctl L2: 1 x 0.5ml	BXC0999A	Lyo.

hCG Serum Control

- Fortress hCG Serum controls are intended for monitoring the accuracy and precision of hCG assays in both quantitative and qualitative formats.
- Controls are supplied as lyophilised materials stable up to expiry at 2-8 °C.
- The controls are available in two levels – positive and negative.
- Value assignment of the Positive Controls is performed in European reference laboratories.
- 100% Human serum based for matrix conformity.
- Positive control has a hCG concentration of >/= 20 lU/ml, making it ideal for sensitivity testing of qualitative assays.

Description		Size	Cat No.	Type
hCG Serum Control	*Positive*	1 x 1 ml	BXC0681A	LS.
hCG Serum Control	*Negative*	1 x 1 ml	BXC0682A	LS.
hCG Serum Control	*Positive*	1 x 5 ml	BXC0683A	LS.

H-Pylori Control

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
H-Pylori Control (2 Levels)	2 x 1 x 1 ml	BXC0684A	LS

Tumour Marker Controls

For use on all major systems & methods including Immunoassay Instruments

- Fortress Tumour Marker controls are multi analyte controls designed for monitoring accuracy.
- The controls are supplied in a Lyophilised format for enhanced stability.
- 100% human serum.
- Reconstituted stability of 10 days at 2-8 °C and 30 days at 20 °C.
- Stable up to expiry at 2-8 °C.

Analytes

AFP
Beta-2-microglobulin
CA 15-3
CA 19-9
CA 72-4
CA 125
Calcitonin
CEA
Cyfra 21
Ferritin
HCG
Neuron Specific Enolase
PSA
fPSA
Thyroglobulin

Description	Size	Cat No.	Type
Tumour Marker Control (Level 1)	5 x 2 ml	BXC0792A	Lyo.
Tumour Marker Control (Level 2)	5 x 2 ml	BXC0792B	Lyo.
Tumour Marker Control SET (2-Levels)	2 x 1 x 2ml	BXC0793A	Lyo

Vitamin-D Calibrators & Controls

- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 30 days at 2-8°C.

Description	Size	Cat No.	Type
Vitamin-D Calibrator Set (5 Levels)	5 x 1 x 1ml	BXC0475A	LS.
Vitamin-D Control Set (2 levels)	2 x 1 x 1ml	BXC0474A	LS.

Infectious Diseases

Infectious diseases controls are crucial in diagnostics for ensuring the accuracy and reliability of tests that identify and quantify pathogens, such as bacteria, viruses, fungi, and parasites, in biological samples. These controls consist of standardised samples containing known concentrations of specific pathogens or their genetic material, which are used to validate the performance of diagnostic assays like polymerase chain reaction (PCR) tests and enzyme immunoassays. By incorporating these controls, laboratories can monitor the sensitivity and specificity of tests, thereby reducing the risk of false-negative or false-positive results that could impact patient management and public health responses.

The role of infectious diseases controls extends to maintaining quality assurance in laboratory settings, ensuring consistent and reproducible results across different testing environments and methodologies. Reliable diagnostics for infectious diseases are essential for timely treatment, outbreak control, and infection prevention strategies. Regular use of these controls helps identify potential issues with reagents, equipment, or testing protocols, which is critical for maintaining the integrity of diagnostic results. Overall, infectious diseases controls significantly enhance the quality of healthcare by providing accurate diagnostic information that informs treatment decisions and public health initiatives, ultimately improving patient outcomes and community health safety.

The Fortress Infectious Diseases Controls are available in a liquid stable format for convenience and ease-of-use, being made from 100% human serum to negate matrix effects. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

COVID-19 Anitgen Controls

Description	Size	Cat No.	Type
COVID-19 Anitgen Control Pair	2 x 1 x 0.5ml	COVIDNPC	LS

HBsAb Control Panel

- 100% Human serum from single donors.
- The panel is supplied in 5 levels.
- Open vial stability of 60 days when stored at 2-8 °C without contamination.
- HBsAg Controls have the following concentrations; L1 0.2IU/ml, L2 0.5IU/ml, L3 1.0IU/ml, L4 2.0IU/ml, L5 4.0IU/ml.

Description	Size	Cat No.	Type
HBsAb Control Panel (2 Levels)	2 x 1 x 0.5ml	BXC0805A	LS
HBsAb Control Panel (5 Levels)	5 x 1 x 0.5ml	BXC0800A	LS

HCV Antibody Control Panel

- The control panel is supplied as a liquid panel stable up to expiry at 2-8 °C.
- 100% Human serum
- The panel is supplied in 4 levels.
- Open vial stability: 30 days at 2-8 °C without contamination.

Description	Size	Cat No.	Type
HCV Antibody Control Panel (4 Levels)	4 x 1 x 0.5ml	BXC0804A	LS

HE4

Description	Size	Cat No.	Type
HE4 (Level 1)	1 x 0.25ml	BXC0425A	Lyo.
HE4 (Level 2)	1 x 0.25ml	BXC0425B	Lyo.

HIV-I Antibody Control Panel

- The control panel is supplied as a liquid panel stable up to expiry at 2-8 °C.
- 100% Human serum
- The panel is supplied in 4 levels.
- Open vial stability: 30 days at 2-8 °C without contamination.

Description	Size	Cat No.	Type
HIV-I Antibody Control Panel (4 Levels)	4 x 1 x 1ml	BXC0802A	LS

HIV-I Antigen (p24) Control Panel

- The Control Panel is supplied as a liquid panel stable up to expiry at 2-8 °C.
- 100% Human serum from single donors.
- The panel is supplied in 4 levels.
- Open vial stability: 30 days when stored at 2-8 °C without contamination.

  Level 1 1.25U/ml
  Level 2 2.50U/ml
  Level 3 5.00U/ml
  Level 4 10.00U/ml

Description	Size	Cat No.	Type
HIV-I Antigen (p24) Control Panel (4 Levels)	4 x 1 x 0.5 ml	BXC0803A	LS

IFN-ɣ Control

Description	Size	Cat No.	Type
IFN-ɣ Control	3 x 1 ml	BXC0702A	Lyo.

Procalcitonin Control

Description	Size	Cat No.	Type
Procalcitonin Control Set (2 Levels)	2x1x1ml	BXC0590B	Lyo.

Protein Control

- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- Values are assigned by reference laboratories based in Europe.
- Values for Immunoglobulin, Inflammatory proteins, Complements, Carrier and Storage proteins are available in the control.
- 100% Human material designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
Protein Control (Level 1)	1 x 1 ml	BXC0638A	LS
Protein Control (Level 2)	1 x 1 ml	BXC0639A	LS
Protein Control Set (Level 3)	1 x 1 ml	BXC0640A	LS
Protein Control Set (Level 1 , Level 2 & Level 3)	3 x 1 x 1ml	BXC0641A	LS

Retinol Binding Protein Control

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Retinol Binding Protein Control	1 x 1 ml	BXC0995A	LS

Syphilis Control Panel

- The Control Panel is supplied as a liquid panel stable up to expiry at 2-8 °C.
- 100% Human serum from single donors.
- The panel is supplied in 6 levels.
- Open vial stability: 30 days when stored at 2-8 °C without contamination.

Description	Size	Cat No.	Type
Syphilis Control Panel (6 Levels)	6 x 1 x 0.5ml	BXC0806A	LS

Torch Controls Negative

- The Fortress TORCH Control Negative is intended for use in monitoring the specificity of TORCH Assays to rule out false positive reactions.
- The Control is supplied in a liquid stable format stable up to expiry at 2-8 °C.

Description	Size	Cat No.	Type
TORCH Control Negative	3 x 1 ml	BXC0799A	LS

Torch Controls Positive

- The Fortress TORCH Control Positive is intended for use in monitoring precision of TORCH Assays.
- The control is supplied in a liquid stable format.
- The control is stable up to expiry at 2-8 °C.
- Values are assigned in European Reference Laboratories.
- TORCH-IgM controls are supplied individually to prevent cross-reactivity.
- TORCH-IgG controls are supplied together / vial.

Analytes

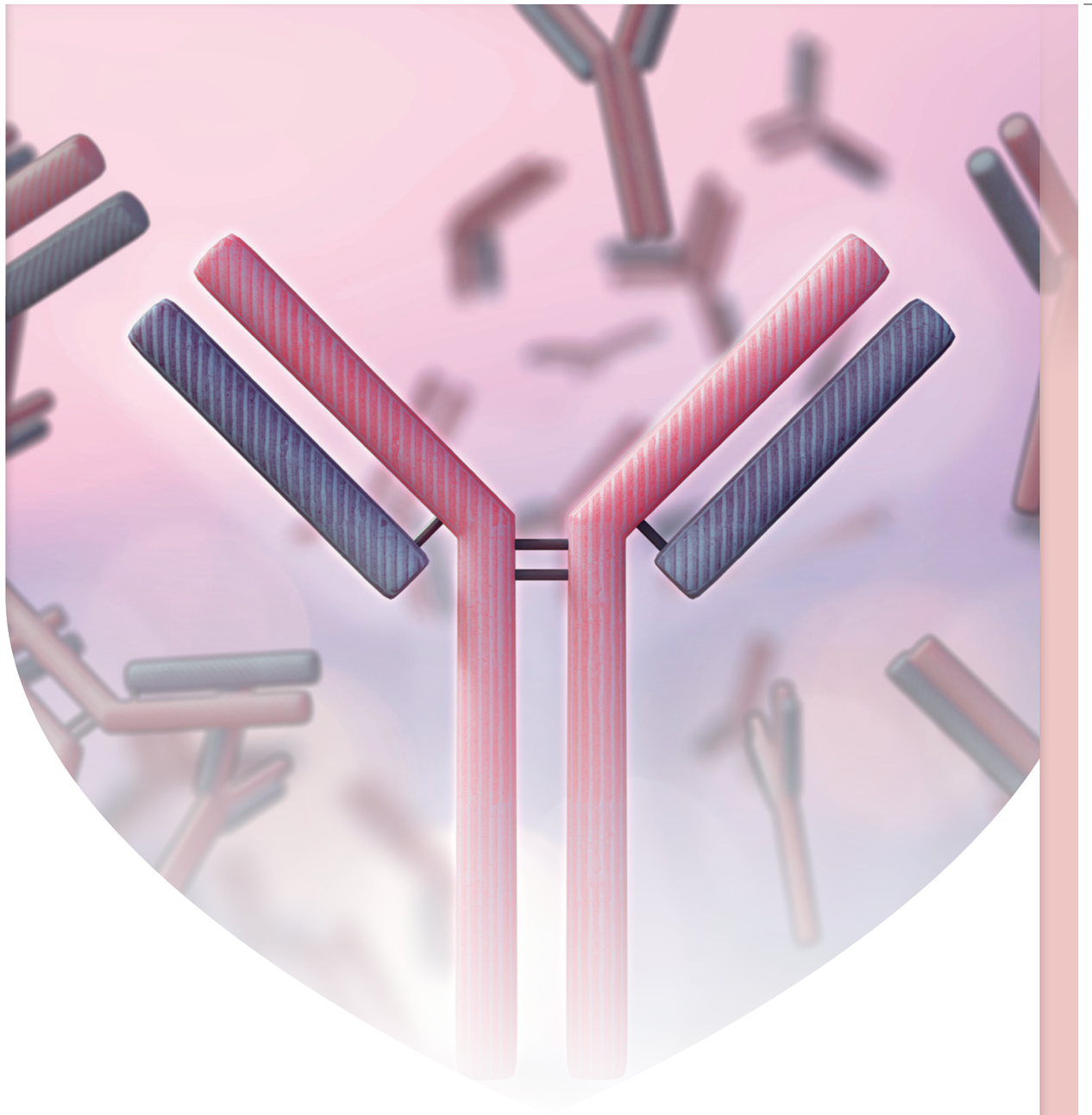
IgG		IgM	
Toxoplasma Gondii IgG	HSV -2 IgG	Toxoplasma Gondii IgM	HSV-2 IgM
Rubella IgG	VZV IgG	Rubella IgM	
CMV IgG	EBV IgG	CMV IgM	**Syphilis RPR**
HSV-1 IgG	Syphilis IgG	HSV-1 IgM	

Description	Size	Cat No.	Type
TORCH IgG Control Positive	3 x 1 ml	BXC0799B	LS
TORCH IgM Control Positive	5 x 1 x 1 ml	BXC0799C	LS

Xanthochromia Quality Control

- Lyophilised format for convenience and longer shelf life.
- Human Based Material.
- True Third Party control providing unbiased assessment of performance.
- Open reconstituted Vial stability of 2 days at 2° to 8°C. Stable for 1 year when stored unopened at 2° to 8°C.

Description	Size	Cat No.	Type
Xanthochromia Positive Control	3 x 1 ml	BXC0355A	Lyo



SECTION 13

IMMUNOLOGY/ PROTEINS

Immunology Controls

Immunology and protein controls are essential in diagnostics for ensuring the accuracy and reliability of tests that assess various immune responses and protein levels in biological samples. These controls consist of standardised samples with known concentrations of specific proteins or antibodies, utilised to validate the performance of assays such as enzyme-linked immunosorbent assays (ELISA) and Western blots. By incorporating these controls, laboratories can evaluate assay precision, sensitivity, and specificity, thus reducing the risk of incorrect results that could lead to misdiagnoses or inappropriate treatment decisions.

Immunology and protein controls play a key role in maintaining quality assurance in laboratory processes, ensuring consistent and reproducible test results across various assays. Reliable diagnostics are crucial for diagnosing autoimmune disorders, allergies, and infections, as well as monitoring treatment responses. Regular use of these controls helps identify potential issues with reagents or equipment, facilitating accurate and timely patient management. Overall, they significantly enhance healthcare quality by providing dependable diagnostic information that informs clinical decisions and improves patient outcomes.

The majority of the Fortress Immunology/Protein Controls are available in a liquid stable format for convenience and ease-of-use and are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

APO A1/B Calibrator Series

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.

Description	Size	Cat No.	Type
APO A1/B Calibrator Series	6 x 1 x 1 ml	BXC0413A	LS.

ASO (Single Point) Calibrators

- Values are assigned by in house methods and instruments.
- 100% human material designed for matrix conformity.
- The liquid stable ASO Single point calibrator has a shelf life of 2 years when stored at 2-8 °C.
- Once opened the calibrator is stable for a period of 30 days when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
ASO (Single Point) Calibrator	1 x 1 ml	BXC0323A	LS
ASO (Single Point) Calibrator	3 x 1 ml	BXC0323B	LS

ASO, CRP, RF Control

- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The values are assigned in European Reference Laboratories.
- 100% Human serum designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.
- This material is presented in a liquid stable format and is stable up to expiry at 2-8 °C.

Description	Size	Cat No.	Type
ASO, CRP, RF Control	3 x 1 ml	BXC0645A	LS

CRP Controls & Calibrators

- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The values are assigned in European Reference Laboratories.
- 100% Human serum designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
CRP (Single Point) Calibrator	3 x 1 ml	BXC0324A	LS
CRP (Multi Point) Calibrator	6 x 1 x 1 ml	BXC0324B	LS
CRP (ULTRA SENSITIVE) Low Control	3 x 1 ml	BXC0325A	LS
CRP (ULTRA SENSITIVE) Standard Set	5 x 1 x 0.5 ml	BXC0327A	LS
CRP Control (Level 1)	5 x 1 ml	BXC0326A	LS
CRP Control (Level 2)	5 x 1 ml	BXC0326B	LS
CRP Control Set	2 x 1 x1 ml	BXC0326C	LS

ESR Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
ESR Control (Level 1)	2 x 10 ml	BXC0631A	LS
ESR Control (Level 2)	2 x 10 ml	BXC0632A	LS

IgE Calibrators & Controls

- Lyophilised product stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.
- Reconstituted stability of 30 days at -20°C.

Description	Size	Cat No.	Type
IgE Calibrator	1 x 1 ml	BXC0752A	Lyo.
IgE Control Set (Level 1 & Level 2)	2 x 1 x 1ml	BXC0753A	Lyo.

Protein Control

- This control is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- Values are assigned by reference laboratories based in Europe.
- Values for Immunoglobulin, Inflammatory proteins, Complements, Carrier and Storage proteins are available in the control.
- 100% Human material designed for matrix conformity.
- Once opened the control is stable for a period of 30 days when stored without contamination at 2-8 °C.

Analytes

Albumin	CRP	IgA	Lambda Light Chains
Alpha-1 Acidglycoprotein	C1q Inactivator	IgG	Prealbumin
Alpha-1 Antitrypsin	C1 Esterase Inhibitor	IgM	Free Lambda Light Chain
Alpha-2 Macroglobulin	Ceruloplasmin	IgE	Transferrin
ASO	Complement C3	Kappa Light Chains	Total Protein
Antithrombin-III	Complement C4	Retinol Binding Protein	
Beta-2-Microglobulin	Ferritin	Free Kappa Light Chain	
	Haptoglobin	Rheumatoid Factor	

Description	Size	Cat No.	Type
Protein Control (Level 1)	1 x 1 ml	BXC0638A	LS
Protein Control (Level 2)	1 x 1 ml	BXC0639A	LS
Protein Control Set (Level 3)	1 x 1 ml	BXC0640A	LS
Protein Control Set (Level 1 , Level 2 & Level 3)	3 x 1 x 1ml	BXC0641A	LS

Retinol Binding Protein Control

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Retinol Binding Protein Control	1 x 1 ml	BXC0995A	LS

SAA Control

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.

Description	Size	Cat No.	Type
SAA Control	3 x 1 ml	BXC0703A	Lyo.

RF (Multi-Point) Calibrators

- This Calibrator is presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- The Calibrator is presented as a single level calibrator which can be diluted as necessary for calibrating RF Turbidimetric Assays.
- Values are assigned by in house methods and instruments.
- 100% human material designed for matrix conformity.
- Once opened the control is stable for a period of 30 days. when stored without contamination at 2-8 °C.

Description	Size	Cat No.	Type
RF (Multi-Point) Calibrator	1 x 2ml	BXC0612A	LS
RF (Multi-Point) Calibrator	3 x 2ml	BXC0612B	LS

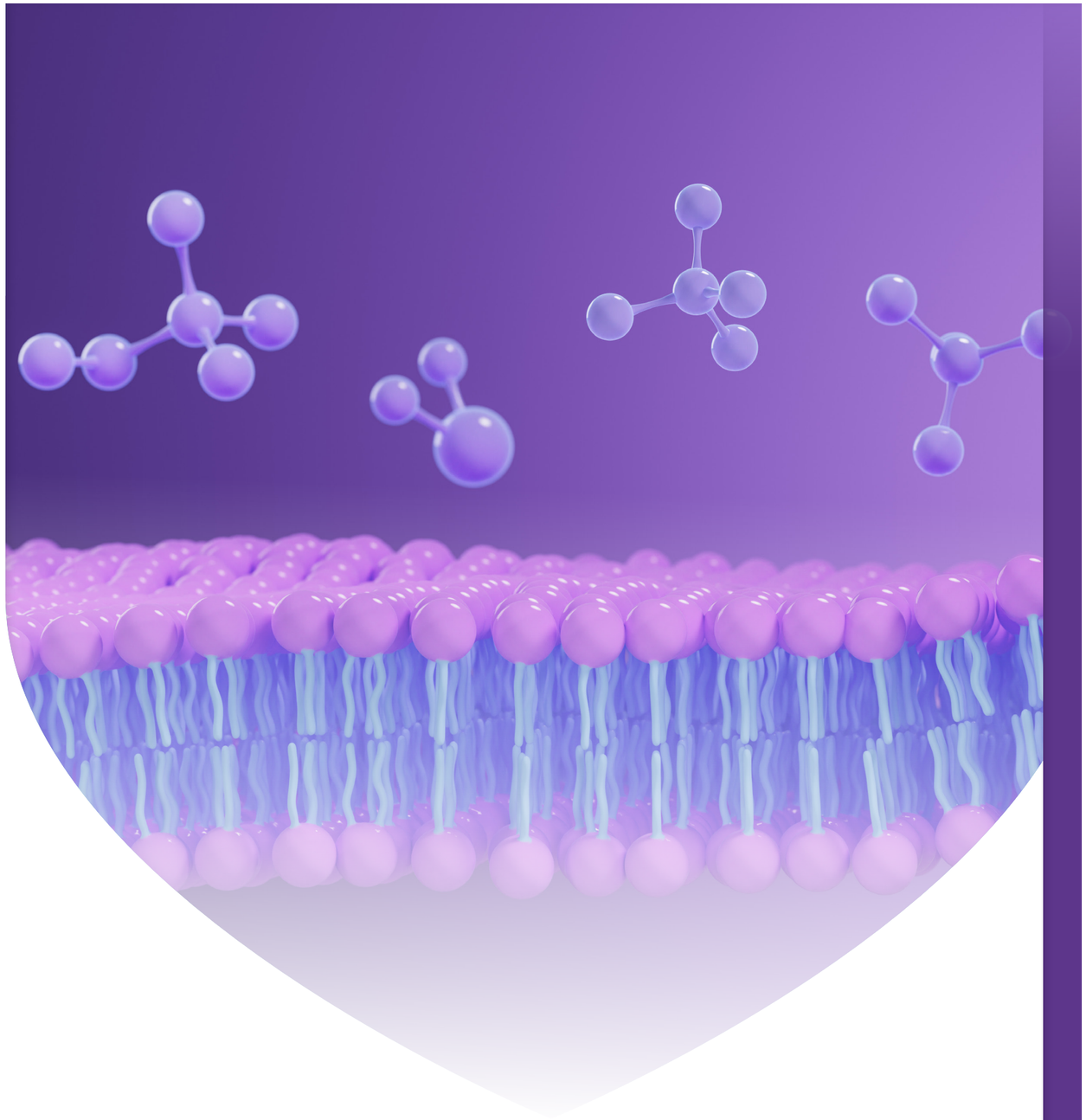
Specific Protein Calibrators

- Fortress Specific Protein Calibrator is a single level multi-analyte calibrator for use in automated systems with auto dilution facility.
- Fortress Specific Protein Calibrator set is a multi analyte multi level calibrator set for calibrating protein assays.
- Both the Calibrators are presented in a liquid stable format and is stable up to expiry when stored at 2-8 °C.
- 100% Human material designed for matrix conformity.
- Once opened, the calibrator is stable for a period of 30 days when stored without contamination at 2-8 °C.

Analytes

Albumin	CRP	IgA	Lambda Light Chains
Alpha-1 Acidglycoprotein	C1q Inactivator	IgG	Prealbumin
Alpha-1 Antitrypsin	C1 Esterase Inhibitor	IgM	Free Lambda Light Chain
Alpha-2 Macroglobulin	Ceruloplasmin	IgE	Transferrin
ASO	Complement C3	Kappa Light Chains	Total Protein
Antithrombin-III	Complement C4	Retinol Binding Protein	
Beta-2-Microglobulin	Ferritin	Free Kappa Light Chain	
	Haptoglobin	Rheumatoid Factor	

Description	Size	Cat No.	Type
Specific Protein Calibrator	1 x 1 ml	BXC0644A	LS
Specific Protein Calibrator Set	6 x 1 x 1 ml	BXC0646A	LS



SECTION 14
LIPIDS

Lipid Controls

Lipid controls are essential in diagnostics for accurately measuring lipid levels, such as cholesterol and triglycerides, in biological samples. These controls consist of standardized samples with known lipid concentrations, which validate the performance of assays used in lipid testing.

By incorporating lipid controls, laboratories ensure the reliability and precision of test results, which are crucial for diagnosing and managing conditions like hyperlipidemia and cardiovascular diseases. Regular use of these controls helps identify potential issues with reagents or instruments, ultimately supporting effective patient management and enhancing the overall quality of healthcare through accurate lipid profiling. The Fortress Lipid Controls are lyophilised for enhanced stability and are suitable for automated and semi-automated systems. The multi-analyte controls offer test menu consolidation. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Glycerol Control

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Glycerol Control	2 x 5 ml	BXC0278A	LS.

HDL/LDL Calibrators

- Fortress HDL/LDL Cholesterol Calibrator is presented in a Lyophilised format for enhanced stability, stable up to expiry at 2-8 °C.
- Once opened and reconstituted the control is stable for 7 days at 2-8 °C, or 30 days at -20 °C.
- 100% human material designed for matrix conformity.

Analytes	
HDL Cholesterol (Direct)	LDL Cholesterol (Direct)

Description	Size	Cat No.	Type
HDL/LDL Calibrator	3 x 1 ml	BXC0315D	Lyo.
HDL/LDL Calibrator	1 x 1 ml	BXC0315E	Lyo.

Lipid Controls

- The Fortress Lipid Controls are intended for monitoring accuracy and precision.

Analytes		
Apolipoprotein A1 Apolipoprotein B Cholesterol	HDL Cholesterol (Precipitation) HDL Cholesterol (Direct) LDL Cholesterol (Direct)	LDL Cholesterol (Precipitation) & Triglycerides

Description	Size	Cat No.	Type
Lipid Control Level 1 (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 ml	BXC0317A	Lyo.
Lipid Control Level 2 (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 ml	BXC0330A	Lyo.
Lipid Control Level 3 (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 ml	BXC0316A	Lyo.
Lipid Control Set (TRI-LEVELS) (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 x 1 ml	BXC0350A	Lyo.

15

SECTION 15

MATERNAL SCREENING

Maternal Screening Controls

Maternal screening controls are essential in diagnostics for accurately assessing the health of pregnant individuals and identifying potential risks to the developing fetus. These controls consist of standardised samples with known concentrations of biomarkers, such as hormones and proteins, used to validate the performance of screening assays. By incorporating these controls, laboratories ensure the reliability and accuracy of test results, which are crucial for detecting conditions like gestational diabetes, preeclampsia, and chromosomal abnormalities, thereby informing timely clinical interventions.

The role of maternal screening controls also extends to maintaining quality assurance in laboratory processes, ensuring consistent and reproducible results across different tests. Reliable maternal diagnostics are critical for guiding prenatal care and enabling informed decision-making for expectant parents. Regular use of these controls helps identify any potential issues with reagents or equipment, ultimately supporting effective patient management and improving health outcomes for both mothers and their babies. The Fortress Maternal Screening Controls are available in a lyophilised format offering enhanced stability and are 100% human serum based to negate matrix effects.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Anti-Mullerian Hormone (AMH) Calibrators & Controls

- Lyophilised for long shelf life, stable to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8°C.
- Compatable with all AMH assays.

Description	Size	Cat No.	Type
Anti-Mullerian Hormone (AMH) Calibrators & Control Set	Calibrator Set: 2 x 1x0.5ml ; Control Set: 2x1x0.5ml	BXC0999A	Lyo.

Maternal Screening Control

For screening of Down's syndrome & Spina Bifida compatible for use on most clinical chemistry systems including immunoassay systems.

- Screening Controls are multi analyte controls intended for use in monitoring accuracy and precision for assays used in first and second trimester screening of Downs Syndrome and Spina Bifida.
- The Controls are provided in a Lyophilised format stable up to expiry at 2-8 °C.
- Reconstituted stability of 7 days at 2-8 °C.
- 100% human serum.

Analytes

AFP Free beta hCG	Inhibin A PAPP-A	Total hCG Unconjugated Estriol

Description	Size	Cat No.	Type
Maternal Screening Control (Level 1)	2 x 1 ml	BXC0695A	Lyo.
Maternal Screening Control (Level 2)	2 x 1 ml	BXC0695B	Lyo.
Maternal Screening Control (Level 3)	2 x 1 ml	BXC0695C	Lyo.
Maternal Screening Control Tri-Level	3 x 1 x 1 ml	BXC0699A	Lyo.

PAPP-A & f-beta-hCG Controls

- The Controls are provided in a Lyophilised format stable up to expiry at 2-8 °C.
- 100% human serum.
- Reconstituted stability of 7 days at 2-8 °C.

Description	Size	Cat No.	Type
PAPP-A & f-beta-hCG Control (Level 1)	1 x 0.5 ml	BXC0337A	Lyo.
PAPP-A & f-beta-hCG Control (Level 2)	1 x 0.5 ml	BXC0338A	Lyo.
PAPP-A & f-beta-hCG Control (Level 3)	1 x 0.5 ml	BXC0339A	Lyo.
PAPP-A Control	1 x 0.5 ml	BXC0240A	Lyo.

Peadiatric Control

- L
- R
- C

Description	Size	Cat No.	Type
Paediatric Control	3 x 1ml	BXC0807A	Lyo.

Pre-eclampsia

Pre-eclampsia is a disorder of pregnancy that is associated with new-onset hypertension most often after 20 weeks' gestation and frequently near term. During the 2nd and 3rd trimesters soluble fms-like tyrosine kinase 1 and Placental Growth Factor (PLGF) are both predictive and diagnostic for pre-eclampsia. It has been shown that increased levels of sFlt-1 and decreased levels of PlGF in maternal serum can predict the subsequent onset of pre-eclampsia..

Determining serum PlGF concentration, used as a single marker, or sFlt-1 and PlGF, used as a ratio, improve the clinical management and decision making (risk stratification) with women showing signs and symptoms of pre-eclampsia.

PlGF Testing will be valuable:

- For testing women with signs and symptoms of pre-eclampsia after week 20 of gestation
- To help Rule-out and Rule-in suspected pre-eclampsia
- To monitor women that are at high risk for pre-eclampsia
- To confirm clinical suspection of pre-eclampsia with symptomatic women and/or to confirm unclear diagnosis of pre-eclampsia
- Serum concentrations of sFlt-1 and PlGF can differentiate healthy women from women with pre-eclampsia. Changes in sFlt-1 and PlGF levels reflect the severity of the disease.

PlGF as a single marker or sFlt-1/PlGF ratio. PlGF alone compared to sFlt-1/PlGF ratio for pre-eclampsia rule-in and rule-out has a comparable performance, and both options are equally recommended for clinical use. In addition to SFlt-1/PlGF ratio, PLGF alone, with concentration based cut-offs, could provide more simpler and affordable alternative to dual biomarker testing. Using PlGF has additional advantages. Studies have shown that PlGF is a good marker (decreased serum PlGF level) for identifying pregnancies with placental insufficiency including fetal growth restriction and/or stillbirth

PLGF Controls

For screening of Down's syndrome & Spina Bifida compatible for use on most clinical chemistry systems including immunoassay systems.

Description	Details	Size	Cat No.	Type
Placental Growth Factor (PLGF) Control Level-1	**Target: 30pg/ml**	3 x 2 ml	BXC0700A	LS.
Placental Growth Factor (PLGF) Control Level-2	**Target: 100pg/ml**	3 x 2 ml	BXC0700B	LS.
Placental Growth Factor (PLGF) Control Level-3	**Target: 600pg/ml**	3 x 2 ml	BXC0700C	LS.

Pre-eclampsia Control

Description	Details	Size	Cat No.	Type
Pre-eclampsia Control Level-1	**s-FLT-1 (soluble fms-like tyrosine Kinase-1)**	3 x 1 ml	BXC0704A	Lyo.
Pre-eclampsia Control Level-2	**s-FLT-1 (soluble fms-like tyrosine Kinase-1)**	3 x 1 ml	BXC0704B	Lyo.

16

SECTION 16
NEONATAL SCREENING

Neonatal Screening Controls

Neonatal screening controls are essential in diagnostics for ensuring the accuracy and reliability of tests that detect metabolic and genetic disorders in newborns, enabling timely interventions that can prevent serious health issues and improve long-term outcomes.

The Fortress Neonatal Screening Controls are dried blood spot (DBS) which ensures accurate, reliable and repeatable results.

BCAA (Leucine) Calibrators & Controls

Description	Size	Cat No.	Type
BCAA (Leucine) Calibrator	**2 x 1 Disc**	BXC0067A	Disc
BCAA (Leucine) (Level 1)	**2 x 1 Disc**	BXC0068A	Disc
BCAA (Leucine) (Level 2)	**2 x 1 Disc**	BXC0068B	Disc
BCAA (Leucine) (Level 3)	**2 x 1 Disc**	BXC0068C	Disc
BCAA (Leucine) (Level 4)	**2 x 1 Disc**	BXC0068D	Disc
BCAA (Leucine) (Control Set) (4 Levels)	**4 x 1 x 2 Disc**	BXC0069A	Disc

Dried Bloodspot Calibrators on Filter Paper for Neonatal Screening

Description	Size	Cat No.	Type
Dried Bloodspot Calibrators on filter paper for Neonatal Screening	**4 x 1 x 1 Disc**	BXC0059A	Disc

G-6-PDH Controls

- Values assigned by reference Laboratories in Europe.
- Stable to expiry at 2-8 °C.
- Reconstituted stability of 5 days at 2-8 °C.
- Typical Levels:
  G-6-PDH Deficient Control : 100 - 200 U/l.
  G-6-PDH Normal Control : 900 - 1400 U/l.

Description	Size	Cat No.	Type
G-6-PDH Control (Normal)	1 x 1 ml	BXC0573B	Lyo.
G-6-PDH Control (Deficient)	1 x 1 ml	BXC0572B	Lyo.

PKU Calibrators & Controls

4 Levels of Phenylalanine.

Description	Size	Cat No.	Type
PKU Calibrator	2 x 1 Disc	BXC0064A	Disc
PKU (Level 1)	2 x 1 Disc	BXC0065A	Disc
PKU (Level 2)	2 x 1 Disc	BXC0065B	Disc
PKU (Level 3)	2 x 1 Disc	BXC0065C	Disc
PKU (Level 4)	2 x 1 Disc	BXC0065D	Disc
PKU (Control Set) (4 Levels)	4 x 1 x 2 Disc	BXC0066A	Disc

Total Galactose Calibrators & Controls

Description	Size	Cat No.	Type
Total Galactose Calibrator	1 x 1ml	BXC0060A	LS.
Total Galactose (Level 1)	1 x 1ml	BXC0061A	LS.
Total Galactose (Level 2)	1 x 1ml	BXC0061B	LS.
Total Galactose (Level 3)	1 x 1ml	BXC0061C	LS.
Total Galactose (Level 4)	1 x 1ml	BXC0061D	LS.
Total Galactose (Control Set) (4 Levels)	1 x 1ml	BXC0062A	LS.

17

SECTION 17

PAEDIATRIC SCREENING

Paediatric Screening Control

Paediatric screening controls are crucial in ensuring early detection of health conditions and developmental issues in children, which allows for timely interventions that can significantly improve long-term outcomes. By identifying potential problems before symptoms appear, screenings provide an opportunity to prevent complications and enable treatments that can mitigate the impact of various disorders.

Early detection is particularly important for conditions like metabolic disorders, which, if untreated, can lead to severe consequences, but are manageable when caught early. The importance of paediatric screening also lies in its ability to support families in understanding and addressing their child's health needs. Regular screenings provide parents with reassurance and guidance, helping them monitor their child's development and identify any potential issues early on. This proactive approach reduces the risk of delayed diagnosis, which can lead to more complex and costly treatments in the future. By focusing on preventive care and early intervention, paediatric screening controls contribute to better health outcomes, reduced healthcare burdens, and improved quality of life for both children and their families.

The Fortress Paediatric Control is lyophilised for enhanced stability and ensures accuracy and precision. The controls are supplied with instrument and method specific assigned values.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Paediatric Control

- The Control is supplied in a Lyophilised format with a shelf life of 2 years when stored at 2-8°C.
- Reconstituted stability of 5 days at 2-8 °C.
- Excellent for clinical decision making.

Analytes

ALP Bilirubin (Total & Direct)	Calcium Chloride	Inorganic Phosphorus Magnesium	Potassium Sodium

Description	Size	Cat No.	Type
Paediatric Control	3 x 1 ml	BXC0807A	Lyo.

SECTION 18

SPECIALITY CONTROLS

Speciality Controls

Serum indices are crucial in diagnostics for providing valuable information about the concentrations of various substances in the blood, such as proteins, enzymes, and electrolytes, which are essential for evaluating overall health and diagnosing specific conditions. These indices, which often include measures like albumin, globulin, and total protein levels, help assess organ function, nutritional status, and the presence of inflammatory or pathological processes. By accurately measuring serum indices, healthcare providers can gain insights into a patient's health status, facilitating timely diagnosis and effective treatment planning.

The role of serum indices in diagnostics extends to maintaining quality assurance in laboratory practices, ensuring that test results are consistent and reliable across different assays and patient samples. Regularly utilising controls and standardised methods in serum index testing helps identify potential discrepancies, such as issues with reagents or instruments, thereby supporting accurate clinical decision-making. Overall, serum indices significantly enhance the quality of healthcare by providing essential diagnostic information that guides treatment strategies and improves patient outcomes.

The Fortress Serum Indices Controls are designed to monitor the ability of an instrument to accurately measure lipaemia, icterus and haemolysis (LIH) in specimens. The controls are 100% human serum based to negate matrix effects and are compatible with a variety of clinical chemistry analysers.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Serum Indices (LIH)

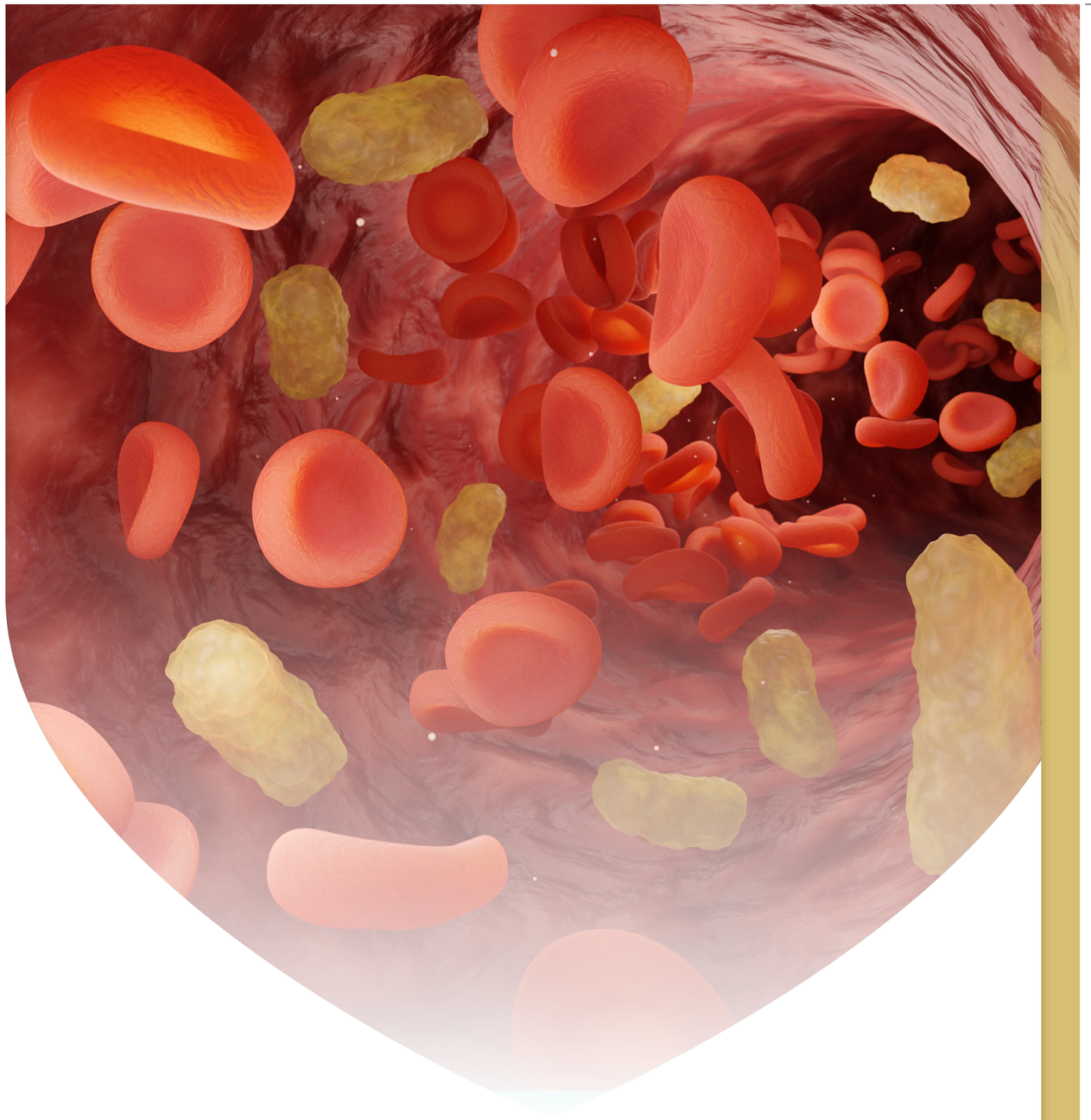
- Available in lypholised and liquid stable formats.
- 100% Human based
- Stable to expiry date at 2-8°C.
- Reconstituted stability of 14 days at 2-8 °C.
- 4 levels available.

Analytes

Lipemia	Icterus	Haemolysis

Description	Details	Cat No.	Size
Serum Indices (LIHN)	Lyophilised For Beckman Coulter Series	BXC0599F	3 x 4 x 5 ml
Serum Indices (LIH)	Lyophilised For Beckman Coulter Series	BXC0599E	4 x 5 ml
Serum Indices (LIH)	Lyophilised For Beckman Coulter Series	BXC0599D	4 x 5 ml
Serum Indices (LIH)	Lyophilised For Beckman Coulter Series	BXC0599C	4 x 5 ml
Serum Indices (LIHN)	Lyophilised For Beckman Coulter Series	BXC0599B	4 x 5 ml
Serum Indices (LIH)	Lyophilised For Beckman Coulter Series	BXC0599A	4 x 1 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Beckman Coulter Series	BXC0600F	3 x 4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Beckman Coulter Series	BXC0600E	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Beckman Coulter Series	BXC0600D	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Beckman Coulter Series	BXC0600C	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Beckman Coulter Series	BXC0600B	4 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Beckman Coulter Series	BXC0600A	4 x 1 x 5 ml
Serum Indices (LIHN)	Lyopholised Frozen for Roche Series	BXC0604F	3 x 4 x 5 ml
Serum Indices (LIH)	Lyopholised Frozen for Roche Series	BXC0604E	4 x 5 ml
Serum Indices (LIH)	Lyopholised Frozen for Roche Series	BXC0604D	4 x 5 ml
Serum Indices (LIH)	Lyopholised Frozen for Roche Series	BXC0604C	4 x 5 ml
Serum Indices (LIH)	Lyopholised Frozen for Roche Series	BXC0604B	4 x 5 ml
Serum Indices (LIHN)	Lyopholised Frozen for Roche Series	BXC0604A	4 x 1 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Roche Series	BXC0605F	3 x 4 x 5 ml

Description	Details	Cat No.	Size
Serum Indices (LIH)	Liquid Frozen For Roche Series	BXC0605E	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Roche Series	BXC0605D	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Roche Series	BXC0605C	4 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Roche Series	BXC0605B	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Roche Series	BXC0605A	4 x 1 x 5 ml
Serum Indices (LIHN)	Lyophilised Frozen for Abbott Series	BXC0606F	3 x 4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Abbott Series	BXC0606E	4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Abbott Series	BXC0606D	4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Abbott Series	BXC0606C	4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Abbott Series	BXC0606B	4 x 5 ml
Serum Indices (LIHN)	Lyophilised Frozen for Abbott Series	BXC0606A	4 x 1 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Abbott Series	BXC0607F	3 x 4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Abbott Series	BXC0607E	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Abbott Series	BXC0607D	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Abbott Series	BXC0607C	4 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Abbott Series	BXC0607B	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Abbott Series	BXC0607A	4 x 1 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Vitros Series	BXC0608F	3 x 4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Vitros Series	BXC0608E	4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Vitros Series	BXC0608D	4 x 5 ml
Serum Indices (LIH)	Lyophilised Frozen for Vitros Series	BXC0608C	4 x 5 ml
Serum Indices (LIHN)	Lyophilised Frozen for Vitros Series	BXC0608B	4 x 5 ml
Serum Indices (LIHN)	Lyophilised Frozen for Vitros Series	BXC0608A	4 x 1 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Vitros Series	BXC0609F	3 x 4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Vitros Series	BXC0609E	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Vitros Series	BXC0609D	4 x 5 ml
Serum Indices (LIHN)	Liquid Frozen For Vitros Series	BXC0609C	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Vitros Series	BXC0609B	4 x 5 ml
Serum Indices (LIH)	Liquid Frozen For Vitros Series	BXC0609A	4 x 1 x 5 ml



19

SECTION 19

THALASSAEMIA

Thalassaemia Controls

Thalassemia controls are essential in diagnostics for accurately detecting and managing thalassemia, a group of inherited blood disorders characterised by abnormal hemoglobin production. These controls consist of standardised samples with known hemoglobin patterns and genetic markers, utilised to validate the performance of diagnostic assays such as hemoglobin electrophoresis and molecular testing. By incorporating these controls, laboratories can ensure the reliability and accuracy of test results, facilitating early diagnosis and appropriate management of thalassemia to prevent complications like anemia and organ damage.

Additionally, thalassemia controls play a crucial role in maintaining quality assurance within laboratory testing processes, ensuring that results are consistent and reproducible across different assays and platforms. Reliable diagnostics are critical for guiding treatment decisions, including the need for blood transfusions or iron chelation therapy, and for providing informed family planning options for affected individuals. Regular use of these controls helps identify any potential issues with reagents or instruments, ultimately supporting effective patient management and enhancing health outcomes for those with thalassemia and their families.

The Fortress Thalassaemia Controls are designed to monitor the accuracy and precision of haemoglobin variant measurements associated with thalassaemia.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Thalassaemia Controls

- Designed for monitoring accuracy and precision of Haemoglobin Variant measurements associated with Thalassaemia.
- The controls are supplied in a Lyophilised format stable up to expiry at 2-8 °C.
- 100% Human blood.

Analytes		
Heamoglobin F	Haemoglobin A2	Haemoglobin S

Description	Size	Cat No.	Type
Thalassaemia (Alpha & Beta) Control (Level 1)	2 x 0.5ml	BXC0665A	LS.
Thalassaemia (Alpha & Beta) Control (Level 2)	2 x 0.5ml	BXC0665B	LS.
HbA2 Control Set	2 x 2 x 0.5ml	BXC0778A	LS.

20

SECTION 20

THERAPEUTIC DRUGS

Therapeutic Drug Controls

Therapeutic drug controls are crucial in diagnostics for ensuring the accuracy and reliability of tests that measure drug levels in the bloodstream, which is essential for optimising pharmacotherapy and ensuring patient safety. These controls consist of standardised samples with known concentrations of specific therapeutic drugs, used to validate the performance of assays such as immunoassays and chromatography. By incorporating these controls, laboratories can monitor assay precision and detect any discrepancies, thereby minimising the risk of subtherapeutic or toxic drug levels that could lead to ineffective treatment or adverse reactions.

Furthermore, the role of therapeutic drug controls extends to maintaining quality assurance in laboratory practices, ensuring consistent and reproducible results across different testing environments. Reliable therapeutic drug monitoring is vital for guiding clinical decisions, adjusting medication dosages, and preventing drug interactions. Regular use of these controls helps identify potential issues with reagents or equipment, ultimately supporting effective patient management and improving health outcomes. Overall, therapeutic drug controls significantly enhance the quality of healthcare by providing accurate diagnostic information that informs treatment strategies and optimises patient care.

The Fortress Therapeutic Drug Controls are manufactured from 100% human serum to negate matric effects and are lyophilised for enhanced stability.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Therapeutic Drug Monitoring

- The Fortress Therapeutic Drug Monitoring controls are intended for checking accuracy and precision.
- The controls are presented as multi analyte, lyophilised controls stable up to expiry at 2-8 °C.
- Reconstituted stability of 14 days when stored at 2-8 °C or 60 days at -20 °C.
- 100% Human serum designed for matrix conformity.

Analytes

Amikacin	Digoxin	Methotrexate	Primidone	Valproic Acid
Caffeine	Ethosuxamide	Paracetamol	Salicylate	Vancomycin
Carbamazepine	Gentamicin	Phenobarbitone	Theophylline	
Cyclosporine	Lithium	Phenytoin	Tobramycin	

Description	Size	Cat No.	Type
Therapeutic Drug Monitoring (Level 1)	5 x 5 ml	BXC0781A	LS.
Therapeutic Drug Monitoring (Level 2)	5 x 5 ml	BXC0782A	LS.
Therapeutic Drug Monitoring (Level 3)	5 x 5 ml	BXC0783A	LS.

21

SECTION 21

URINE

Urine Controls

Urine controls are vital in diagnostics for ensuring the accuracy and reliability of tests that analyse urine samples, which are commonly used to evaluate kidney function, identify metabolic disorders, and screen for drugs or other substances. These controls include standardised samples with known concentrations of various analytes, such as glucose, protein, and specific gravity, which are utilised to validate the performance of assays like dipstick tests and urinalysis. By incorporating these controls, laboratories can monitor assay precision and identify inconsistencies, thereby reducing the risk of incorrect results that could lead to misdiagnosis or inappropriate treatment.

Moreover, urine controls are crucial for maintaining quality assurance in laboratory procedures, ensuring consistent and reproducible results across different assays and platforms. Reliable urine diagnostics are essential for guiding clinical decision-making, particularly in diagnosing conditions such as urinary tract infections, diabetes, and renal diseases. Regular use of these controls helps detect potential issues with reagents or equipment, ultimately promoting effective patient management and improving health outcomes. Overall, urine controls significantly contribute to healthcare quality by providing reliable diagnostic information that informs treatment strategies and enhances patient care.

The Fortress Urine Controls are manufactured from 100% human serum to negate matrix effects and are available in both lyophilised and liquid stable formats offering flexibility to laboratories.

Lyophilised | Liquid Frozen | Liquid Stable | 100% Human Serum | Assayed Target Values Provided

Citrate (Urinary) Calibrators & Controls

- The controls are presented in a Liquid format and are stable up to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Citrate (Urinary) Calibrator [200mg/L]	2 x 1 ml	BXC0136A	LS
Citrate (Urinary) Control (Level 1) [50mg/L]	2 x 1 ml	BXC0137A	LS
Citrate (Urinary) Control (Level 2) [600mg/L]	2 x 1 ml	BXC0139A	LS

Microalbumin Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.
- 100% Human urine

Description	Size	Cat No.	Type
Microalbumin Calibrator Series	5 x 1 ml	BXC0329A	LS
Microalbumin Control (Level 1)	2 x 1 ml	BXC0328A	LS
Microalbumin Control (Level 2)	2 x 1 ml	BXC0328B	LS

Oxolate Calibrators & Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 30 days, at 2-8°C.

Description	Size	Cat No.	Type
Oxalate (Urinary) Calibrator [0.5 mmol/L]	1 x 5 ml	BXC0147A	LS
Oxalate (Urinary) Control (Level 1) [0.2 mmol/L]	1 x 5 ml	BXC0148A	LS
Oxalate (Urinary) Control (Level 2) [0.7 mmol/L]	1 x 5 ml	BXC0149A	LS

Urine Assayed Controls

- Fortress Urine assayed controls are intended for monitoring precision and accuracy for Urine chemistry assays.
- The controls are presented as Lyophilised materials for increased stability, stable up to expiry at 2-8 °C.
- Values are assigned by reference laboratories in Europe.
- Reconstituted stability of 5 days 2-8 °C or 15 days at -20 °C.
- 100% human urine designed for matrix conformity.

Analytes

5HIAA	Creatinine	Microalbumin	Potassium
Amylase	Dopamine	Norepinephrine	Protein
Calcium	Epinephrine	Normetanephrine	Sodium
Chloride	Glucose	Osmolality	Urea
Copper	Magnesium	Oxalate	Uric Acid
Cortisol	Metanephrine	Inorganic Phosphorous	VMA

Description	Size	Cat No.	Type
Urine Assayed Control (Level 1)	10 x 10 ml	BXC0661A	Lyo.
Urine Assayed Control (Level 2)	10 x 10 ml	BXC0661B	Lyo.

Urine Strip Controls

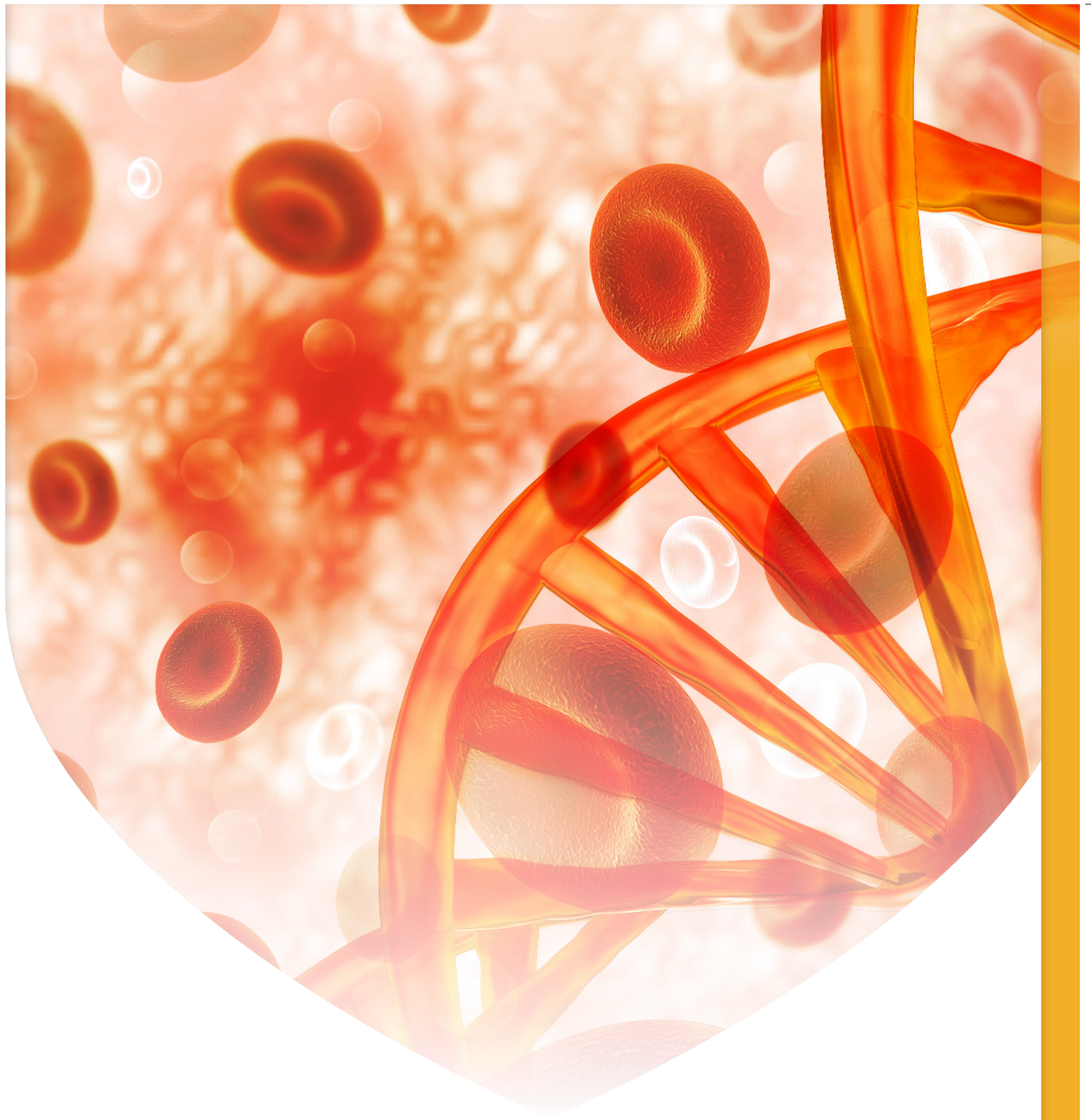
For Urine and hCG Strips Only

- Fortress urine Strip controls are designed for quality control of urine strips.
- Values are assigned by in house methods.
- The Fortress Urine Strip controls are provided in a liquid stable format with a increased stability, stable up to expiry at 2-8 °C.
- Open vial stability of 30 days when stored without contamination at 2-8 °C.
- Compatible with all urine strips from a variety of manufacturers.
- Reconstituted stability of 5 days 2-8 °C or 15 days at -20 °C.
- 100% human urine designed for matrix conformity.

Analytes

Albumin	Glucose	Nitrites	Urobilinogen
Bilirubin	hCG	pH	
Creatinine	Ketones	Protein	
Blood	Leukocytes	Specific Gravity	

Description	Size	Cat No.	Type
Urine Strip Control (Level 1 & Level 2)	2 x 3 x 12 ml	BXC0663A	LS



22

SECTION 22

XANTHOCHROMIA

Xanthochromia Quality Controls

Xanthochromia is derived from the Greek word "xanthos," meaning yellow. The term was first used to describe the pink or yellow pigmentation of cerebrospinal fluid (CSF). This colour change is attributed to varying concentrations of pigmented compounds such as oxyhaemoglobin, bilirubin, and methaemoglobin, which are typically the by-products of red blood cell degradation.

The term is now more widely accepted to represent the yellow colour created by the presence of bilirubin in the CSF. The presence of bilirubin, resulting in yellow discoloration of the CSF, is the contemporary definition of xanthochromia. It can be diagnosed by 2 methods: the traditional visualization or eye test, and the more sensitive and specific spectrophotometry. Detection of Xanthochromia has been facilitated since the 1950s by the spectrophotometric analysis of CSF but is usually possible by simple visual inspection of a sample held in front of a white piece of paper. Heme pigments can be found in CSF within 12 hours of subarachnoid bleeding, reach peak levels after 36–48 hours, and typically disappear over the next 7–10 days.

Bilirubin accumulation in CSF may occur via intrathecal conversion from haemoglobin-heme within macrophages and other leptomeningeal cells, or by passive diffusion from the circulation during periods of severe jaundice. In this latter setting, CSF is not usually stained until the total plasma bilirubin reaches 10–15 mg/dl. The presence of bilirubin in CSF is the main cause of xanthochromia associated with high spinal fluid protein content, usually found above levels of 150 mg/dl.

Fortress Diagnostics has been manufacturing Xanthochromia Controls for a number of years intended for use as a true third party control in monitoring the performance of Bilirubin and Oxyhaemoglobin in Cerebrospinal Fluid. Xanthochromia Controls are supplied as unassayed and are suitable for use as IQC with various UV spectrophotometers. It is designed to deliver a cost-effective control to users.

- Lyophilised
- Liquid Frozen
- Liquid Stable
- 100% Human Serum
- Assayed Target Values Provided

Xanthochromia Quality Control

- Lyophilised format for convenience and longer shelf life.
- Human Based Material.
- True Third Party control providing unbiased assessment of performance.
- Open reconstituted Vial stability of 2 days at 2° to 8°C. Stable for 1 year when stored unopened at 2° to 8°C.

Analytes	
Billirubin	Oxyhaemoglobin

Description	Size	Cat No.	Type
Xanthochromia Positive Control	3 x 1 ml	BXC0355A	Lyo.

SECTION 23

IQC & EQA PROGRAMMES

Seraqual 365: IQC Management Software

The Seraqual 365 IQC Management Software is a peer data QC programme designed for use with Seraqual Controls. It provides a cost effective and comprehensive package for labs who need to manage their daily QC activities on a centralized platform in real time.

SERAQUAL 365
IQC Management Software

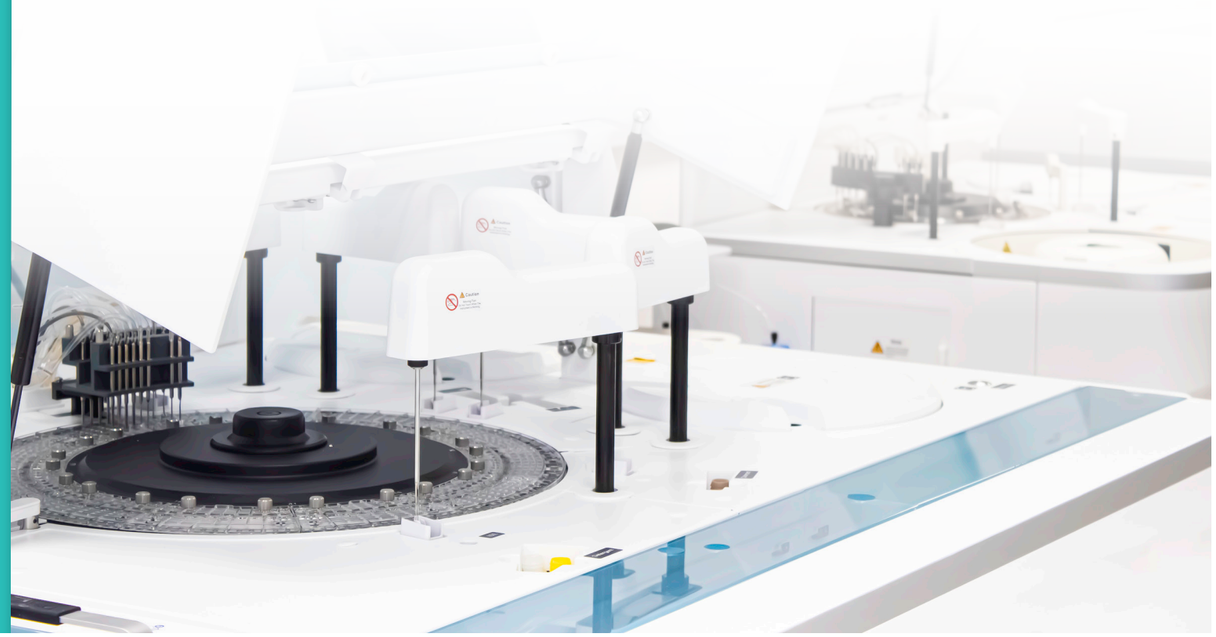
Simple, Easy to Use Peer Comparison Tool

Real Time Data on a Centralised Platform

Cost Effective & Comprehensive QC Data Management Software

The system has a number of features to enhance data review and trouble shooting within a lab to include:

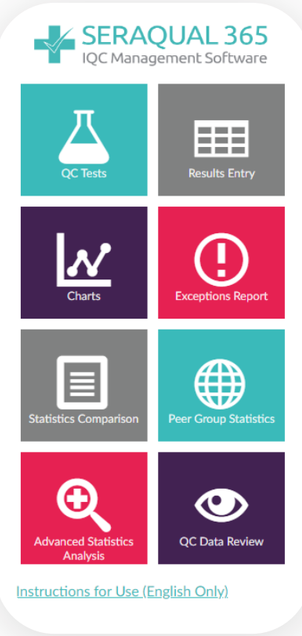
- **A dashboard interface** that presents a condensed panel of the features of the system showing options most frequented. It also flags any exceptions for review
- **A simple easy to use interface** that allow labs to configure and enter results easily with a need for minimal training
- **Interactive charts** for quick and easy performance review including Histogram and Levey –Jennings
- **Exceptions reports** so data from a specified date range can be reviewed quickly
- **Statistical Comparison Report** can be specified by date range at the instrument, method or all method level.
- **Peer Group Statistics** allowing you to compare your results with other labs using the same QC material
- **Advanced Statistical Analysis** that includes performance indicators such as Uncertainty of Measurement (UM), Bias, Total Error (TE) and Sigma Scores.



Ordering Information

Description	Cycle	Cat No.	Size
Seraqual 365 Internal Quality Assesment Programme	1 Cycle = 12 Months (1 Year License)	SERAQ00P	

Software Overview



Instructions for Use (English Only)

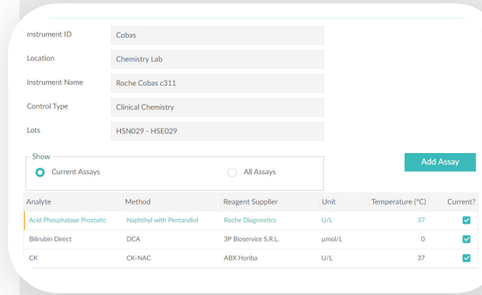
1 Dashboard

Presents a condensed panel of the features of the system showing options most frequented.

A full list of features that the system offers is available from the drop down at the top left hand corner.

It also flags any exceptions for review to allow rapid identification of any QC problems and allow quick and effective corrective action.

2 QC Tests



This option allows a lab to quickly see the instruments registered, the programmes and lots associated with these instruments and then the associated QC test.

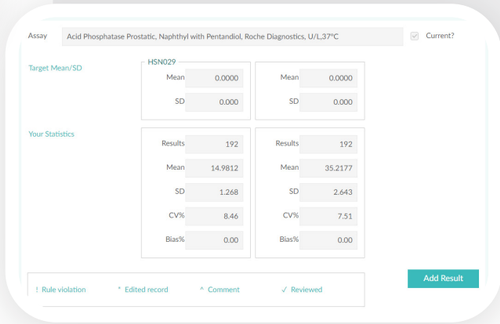
Here a lab can also set the Target mean and SD of a test (cumulative, user defined or Seraqual 365 (targets available for selected assayed lots)).

3 Result Entry

A simple feature to allow easy manual addition of results.

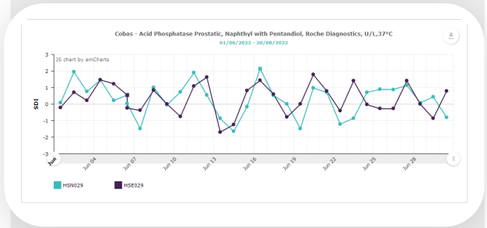
An alarm is activated if a result entered violates a multi rule set.

There are also indicators to show when a result has been edited, commented upon or reviewed.



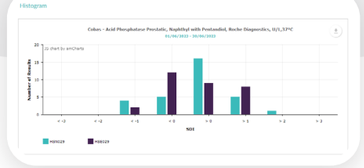
4

Charts



The Levey Jennings and Histograms interactive charts can be generated within a specific date range proving invaluable for identifying data shifts and trends.

The charts can be downloaded, saved, annotated and printed for the users convenience.



5

Exceptions Report

The Exceptions Report presents all results that have violated the multi rules set in a date range that can be specified.

Through colour coding it identifies the violated rules that are ‘Alert’ and those that are ‘Reject’.

Any comments associated with a result are also detailed.

Exceptions Report

Cobas - Chemistry Lab - Roche Cobas c311

Acid Phosphatase Prostatic, Naphthyl with Pentandiol, Roche Diagnostics, U/L,37°C

			HSN029			HSE029	
DATE	TIME	OPERATOR	RESULT		SDI	RESULT	SDI
06/06/2023	11:06:38	FD	15.4000	10:x+	0.5583	36.4000 10:x+	0.5382

Bilirubin Direct, DCA, 3P Bioservice S.R.L., µmol/L

			HSN029			HSE029	
DATE	TIME	OPERATOR	RESULT		SDI	RESULT	SDI
07/06/2023	14:20:48	FD	8.2000	1:2s	2.0474	25.5000	1.8610

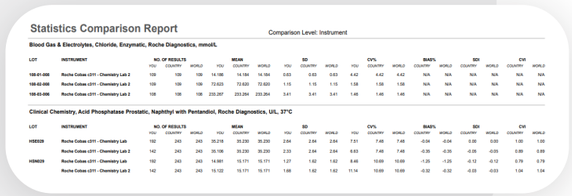
6

Statistics Comparison Report

A worldwide and country comparison of statistics at either the Instrument, Method or All Method level is available in this report.

A date range can be specified.

This report includes performance indicators such as Mean, SD, CV%, Bias %, SDI and CVI.



Statistics Comparison Report

Comparison Level: Instrument

Blood Gas & Electrolytes, Chloride, Enzymatic, Roche Diagnostics, mmol/L

LOT	INSTRUMENT	NO. OF RESULTS			MEAN			SD			CV%			BIAS%			SDI			CVI		
		YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD
158-01-006	Roche Cobas c311 - Chemistry Lab 2	109	109	109	14.186	14.184	14.184	0.63	0.63	0.63	4.42	4.42	4.42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
158-02-006	Roche Cobas c311 - Chemistry Lab 2	109	109	109	72.623	72.620	72.620	1.15	1.15	1.15	1.58	1.58	1.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
158-03-006	Roche Cobas c311 - Chemistry Lab 2	108	108	108	233.267	233.264	233.264	3.41	3.41	3.41	1.46	1.46	1.46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Clinical Chemistry, Acid Phosphatase Prostatic, Naphthyl with Pentandiol, Roche Diagnostics, U/L, 37°C

LOT	INSTRUMENT	NO. OF RESULTS			MEAN			SD			CV%			BIAS%			SDI			CVI		
		YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	YOU	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD	COUNTRY	WORLD
HSE029	Roche Cobas c311 - Chemistry Lab	192	243	243	35.218	35.230	35.230	2.64	2.64	2.64	7.51	7.49	7.49	-0.04	-0.04	0.00	0.00	1.00	1.00		
	Roche Cobas c311 - Chemistry Lab 2	142	243	243	35.106	35.230	35.230	2.33	2.64	2.64	6.63	7.49	7.49	-0.39	-0.39	-0.05	-0.05	0.89	0.89		
HSN029	Roche Cobas c311 - Chemistry Lab	192	243	243	14.981	15.171	15.171	1.27	1.62	1.62	8.46	10.69	10.69	-1.25	-1.25	-0.12	-0.12	0.79	0.79		
	Roche Cobas c311 - Chemistry Lab 2	142	243	243	15.122	15.171	15.171	1.68	1.62	1.62	11.14	10.69	10.69	-0.32	-0.32	-0.03	-0.03	1.04	1.04		

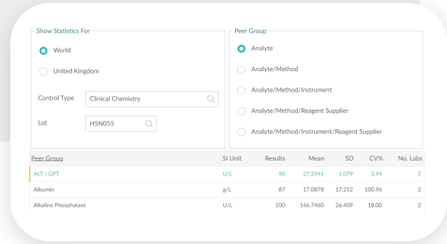
7

Peer Group Statistics

A lab can select World or Country Statistics for a chosen Control Type and Lot.

The peer group can be at a number of different levels as seen in the image.

The report includes Mean, SD, CV% and the number of labs.



Peer Group	SI Unit	Results	Mean	SD	CV%	No. Labs
ALT / GPT	U/L	90	27.3941	1.079	3.94	2
Albumin	g/L	87	17.0878	17.252	100.96	3
Alkaline Phosphatase	U/L	100	146.7460	26.409	18.00	2

8

Advanced Statistics Report

This report draws on a number of important statistical metrics that include Mean, SD, CV%, Uncertainty of Measurement (UM), Bias, TE, Sigma (BV) and Sigma (CLIA).

The report can be based at either the Instrument, Method or All Method Level and if required within a specified date range.

9

QC Data Review

A lab selects a date range (instrument, lot and assay selection is optional) and the report generated displays any results that have not yet been reviewed.

Results violating a multirule are highlighted according to their ‘Alert’ or ‘Reject’ status.

A reviewer has the ability to set all the results to reviewed or individually look at results and comment.

This function allow quick and easy identification of tests that may be problematic.

Additional Features

- Programme available in English, Spanish, Chinese, Farsi and Arabic.
- Co-ordinators have the ability to look at the Statistics Comparison Report and Advanced Statistical Analysis Report of the labs they are responsible for.
- Instruction for Use available on the Software
- Automatic deactivations of peer data to maintain the integrity of the data

For further information please contact admin@seraqual365.com

SEQAS: EQA Management Software

SEQAS is an EQA scheme that forms part of the Fortress Quality Control Platform. EQA helps to assure customers, such as physicians, patients, and health authorities, that the laboratory can produce reliable results. Individual laboratories can use EQA to identify problems in laboratory practices, allowing for appropriate corrective action. EQA participation will help to evaluate reliability of methods, materials, and equipment, and to evaluate and monitor training impact.

SEQAS

Seraqual External Quality Assessment Scheme

For laboratories performing public health-related testing, EQA can help to assure that results from different laboratories during surveillance activities are comparable. EQA participation is usually required for accreditation. Samples received for EQA testing, as well as the information shared by the EQA provider, are useful for conducting educational and professional development activities.

Participation in an external quality assessment program provides valuable data and information for the laboratory which:

- allows peer comparison of performance and results among different test sites;
- provides early warning for systematic problems associated with kits or operations;
- provides objective evidence of testing quality;
- indicates areas that need improvement;
- identifies training needs.

A fast easy-to-use data capture system

Data analysis that is easy to understand & interpret

Monthly cycles for a range of programmes

End of cycle reports

Certificates of registration

SEQAS Programmes

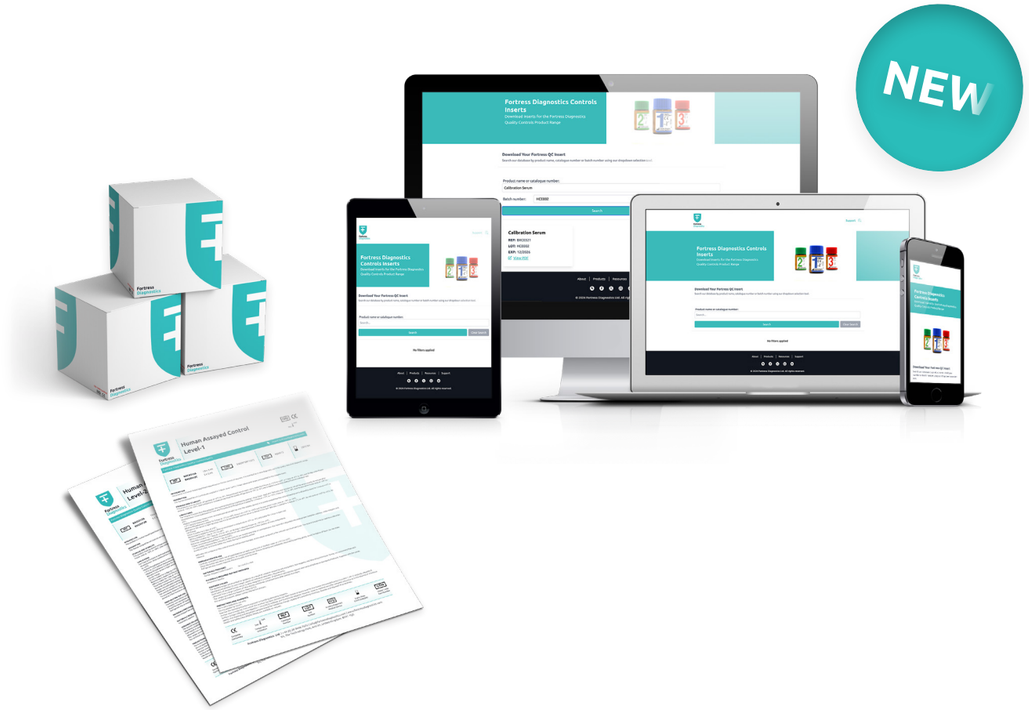
Description	Cycle	Cat No.	Size
SEQAS External Quality Assessment Programme		SEQAS00P	
SEQAS Monthly Clinical Chemistry (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS001	1 x 12 x 5ml
SEQAS Monthly Immunoassay Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS002	1 x 12 x 1ml
SEQAS Haematology Programme (Apr-Mar)	2 Cycles = 12 Months (1 Sample/Month)	SEQAS003	2 x 6 x 3ml
SEQAS Monthly HbA1c Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS004	1 x 12 x 0.5ml
SEQAS Monthly Coagulation Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS005	1 x 12 x 1ml
SEQAS Monthly Lipids Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS006	1 x 12 x 1ml
SEQAS Monthly Cardiac Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS007	1 x 12 x 2ml
SEQAS Monthly Blood Gas & Electrolytes Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS008	1 x 12 x 2ml
SEQAS Monthly Specific Protein Panel Programme (Jan-Dec)	1 Cycle = 12 Months (1 Sample/Month)	SEQAS009	1 x 12 x 1ml

Fortress Quality Control Inserts Portal

Download e-inserts for the Fortress Diagnostics Quality Controls & Calibrators range through our online portal.

Fortress Diagnostics are excited to launch the new Fortress QC Inserts Portal. The portal allows customers to easily search our database of inserts by product name, catalogue number or batch number in our easy-to-use filter tool. Inserts can be viewed online or downloaded in PDF format.

insert.fortressdiagnostics.com



Terms & Conditions

1. General
All quotations made, all orders accepted, all goods sold, all service and advice rendered are subject to these conditions and to the exclusion of any previous conditions of purchase. Any variations to these must be expressly accepted by us in writing.

2. Specifications
We reserve the right to supply goods to the specification and/or design current at the date of dispatch. We cannot accept a request for goods as previously supplied as binding.

3. Admin & Handling Charge
An admin & handling charge of £25.00 will be added to all orders.

4. International Bank Charges
For international orders a £15.00 international bank charge will be added to all BACS payments unless the customer agrees to pay these charges at their end.

5. PayPal/Credit Card Transactions
We accept PayPal, credit card and debit card payments. There is a 3.5% PayPal processing fee added to all customer orders who choose to pay via PayPal this will be detailed on your invoice. This is the same charge that Fortress incur to receive this method of payment.

6. Prices
Although we take great care to ensure price stability, we reserve the right to change prices without notice. Goods will be invoiced at the prices valid on the date of confirmation of the Buyer's order. All prices given are exclusive of VAT unless otherwise stated.

Fortress Diagnostics cannot accept responsibility for typographical errors in pricing within our catalogues, advertising literature or quotations.

Prices quoted are "Ex Works" (Incoterms 2010). Freight, insurance and all other respective costs e.g. Certificate of origin, legalised and notarised documents will be invoiced separately.

7. Delivery
Goods are shipped or dispatched at Buyer's risk. Our standard dispatch dates are 21 days after orders are confirmed and paid in full (unless you have credit terms).

Delivery times quoted are to be treated as an estimate only and Fortress Diagnostics shall not be liable for any failure to deliver within such times whether a time for delivery be quoted or not. We shall not be held responsible for delays caused by anything beyond our reasonable control. Any special delivery requirements must be notified to us in writing at the time of placing the order.

We shall have the right at our discretion to make a reasonable charge for special handling and/or delivery.

The Seller is entitled to make delivery in instalments unless such delivery would be unreasonable or unless otherwise agreed upon and confirmed by the Seller in writing. In the case that a fixed period for delivery is agreed upon and the Seller is in default with the supply, the Buyer shall grant the Seller a reasonable additional period of time, normally of 4 weeks.

8. Order Additions
Any additions will result in a new order being created in line with our standard delivery terms. Where possible we will attempt to dispatch your order additions with your original order but cannot guarantee this.

9. Damage/Loss/Shortage
No claim for breakages or missing goods can be recognised unless notified to Fortress Diagnostics and the carriers within 72 hours of receipt of the goods. If damages or shortages are immediately apparent upon delivery please:
1. Notify the carrier when signing for receipt of the goods.
2. Advise Fortress Diagnostics customer services team as soon as possible.

In the case of non-delivery of a complete consignment notification must be received by us within 10 days of invoice date.

10. Return of Goods
Notification of returns must be made within 1 week of receipt of goods. Goods which have been received damaged or in error must be held in the correct storage conditions.

Do not return the goods until you contact our customer services team for a returned goods authorisation number. Clearly mark the authorisation number on the package to ensure your goods can be speedily processed.

You will appreciate that we cannot accept responsibility for loss or damage to goods being returned to us unless we arranged collection. If the mistake was ours there is of course no charge to you. However, if the goods were incorrectly ordered an administration and re-stocking charge of 25% of the invoice value excluding VAT is chargeable. Temperature controlled products incorrectly ordered will not normally be accepted for return.

11. VAT
We are required to charge VAT on all UK orders at the current VAT rate.

For organisations that are VAT exempt each order must be accompanied by an exemption certificate unless special arrangements have been made in writing. Under circumstances where a VAT exemption certificate does not accompany an order we are obliged by law to charge VAT. If subsequently you reclaim a VAT credit it must be completed within 30 days of invoice date.

12. Payment Terms
Payments are to be made within the agreed payment terms set with our customers. We may at our discretion charge interest at the rate of 5% above the base lending rate of Barclays Bank plc on all overdue accounts to the date of actual payment. Payment in advance or financial guarantees may be requested from customers who do not have an account.

13. Quotations
Quotations are valid for 30 days.

14. Cancellation
Orders may not be cancelled without our prior written agreement and may be subject to a cancellation charge. Standing orders must be cancelled in writing at least 8 weeks prior to what becomes the last shipment date.

15. Liability
Fortress Diagnostics' liability for any loss or damage suffered by you and arising by way of defects in the goods or otherwise, howsoever shall be limited to the invoice price of the goods in respect of or in relation to which loss or damage is claimed. Our liability under this clause shall be in lieu of any warranty or condition implied by law as to the quality or fitness for any particular purpose of the goods and save as provided.

16. Ownership
All goods remain the property of Fortress Diagnostics Limited until payment is received in full. The responsibility for insurance and care of goods, including 3rd party risks lies with the purchaser.

17. Health & Safety
All products sold by Fortress Diagnostics Limited, should be handled by qualified personnel, exercising care during handling, usage and disposal. For further information please contact Fortress Diagnostics Limited.

Control of Substances Hazardous to Health 2002 (COSHH)

All Fortress products are developed and designed for 'IN VITRO' use only.

COSHH safety data sheets are available for all products on request.

Fortress Diagnostics

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