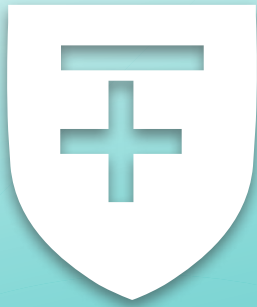




# QUALITY CONTROLS CATALOGUE



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:



#### By Post

Fortress Diagnostics Ltd,  
9A Antrim Technology Park, Belfast  
Road, Co. Antrim, Northern Ireland, BT41  
1QS, United Kingdom.



#### Over the Phone

+44 (0)28 9448 7676



#### By Email

[info@fortressdiagnostics.com](mailto:info@fortressdiagnostics.com)



# Advancing Global Diagnostics

Fortress Diagnostics is a well-established IVD manufacturer based in the United Kingdom supplying products to over 100 countries worldwide. We have been providing our distributors and end users with high quality products for over 20 years.



**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 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 requirements and advance the healthcare industry.

## Quality Controls

**Quality Control is of major importance in assuring the credibility of laboratory results and, in doing so, improving patient care.**

Fortress Quality Controls (Seraqual) are supplied with instrument and method specific assigned values. We can also provide custom made 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, and research institutions and laboratories to develop quality control and calibration solutions for unique and novel biomarkers.

## Availability

Fortress Diagnostics Seraqual Controls and Calibrators are available for:

**Antioxidants**  
**Aqueous Standards**  
**Blood Gas & Electrolytes**  
**Cardiac Controls**  
**Clinical Chemistry**  
**Coagulation/Haemostasis**  
**Diabetes**

**Drugs of Abuse**  
**Haematology**  
**Immunoassay/ Infectious**  
**Immunology/Proteins**  
**Lipids**  
**Maternal Screening**  
**Neonatal Screening**  
**Paediatric Controls**

**Speciality Controls**  
**Thalassaemia**  
**Therapeutic Drugs**  
**Torch**  
**Paediatric**  
**Urine**  
**Xanthochromia**

# Benefits



## Customer Support

Fortress employ a highly skilled team of technical support staff to assist customers with all their needs and technical questions.



## Cost Saving

Wide-ranging analyte content, enable laboratories to consolidate their quality control purchases and therefore benefit from cost savings.



## Accurate

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



## 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.



## Third Party Controls Suitable For Global Market

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



## High Quality

Products are manufactured without use of preservatives or stabilisers, utilising human-based material, which have undergone stringent quality checks for HIV, HBsAg, HCV, HTLV, 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.





### Flexible

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



### Long Shelf Life

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



### Traceability

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



### Consolidation

Fortress quality controls offer a wide parameter range allowing more analyte coverage with single control.



### 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 independent runs.



### Compatibility

Fortress controls are designed to closely mimic human samples, with minimal matrix effects being observed.



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## SECTION 1 ANTIOXIDANTS

Free radical damage contributes to the cause of many chronic health issues, including cardiovascular disease, cancer, diabetes and inflammatory disease. Antioxidants are responsible for preventing free radical induced tissue damage by preventing the formation of radicals, scavenging them, or by promoting their decomposition.

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 Fortress Antioxidant 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 Lyophilised format stable to expiry date at 2-8 °C.
- Reconstituted stability 3 days at 2-8 °C.
- Bovine base

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 and precision.
- Calibrators and Controls are supplied in a Lyophilised format stable up to expiry at 2-8 °C.
- Reconstituted stability 7 days at 2-8 °C or 3 days at 25 °C.
- Bovine base

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 Lyophilised format stable to expiry date at 2-8 °C.
- Reconstituted stability of 7 days at 2-8 °C.
- Bovine base

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

### Total Antioxidant Status Control

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

Description	Size	Cat No.	Type
Total Antioxidant Status Control	5 x 1 ml	BXC0554A	Lyo.





## **SECTION 2** **AQUEOUS** **STANDARDS**

Aqueous standards are water based standards and as such are not serum based standards. Aqueous standards are utilised in standardising the kit, not the patient sample.

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
<b>Albumin</b>	45 g/l (4.5g/dL)	10 x 5 ml	BXCSTD01	LS
<b>Calcium</b>	Referenced against NIST 909b (2.5mmol/l/10mg/dL)	10 x 5 ml	BXCSTD02	LS
<b>Chloride</b>	Referenced against NIST 909b (75mmol/l)	10 x 5 ml	BXCSTD03	LS
<b>Chloride</b>	Referenced against NIST 909b (100mmol/l)	10 x 5 ml	BXCSTD04	LS
<b>Cholesterol</b>	Referenced against NIST 909b (5.17mmol/l/200mg/dL)	10 x 5 ml	BXCSTD05	LS
<b>Creatine</b>	Referenced against NIST 909b (177 µmol/l/2 mg/dL)	10 x 5 ml	BXCSTD06	LS
<b>Creatine/Glucose/Urea Standard</b>	Referenced against NIST 965a / 909b (5.55 mmol/l/100mg/dL/ 177 µmol/l / 8.33mmol/l)	10 x 5 ml	BXCSTD24	LS
<b>Glucose</b>	Referenced against NIST 965a (5.55 mmol/l/100mg/dL)	10 x 5 ml	BXCSTD07	LS
<b>Haemoglobin Standard</b>	For Drabkin's Method (18g/dL)	10 x 5 ml	BXCSTD08	LS
<b>Haemoglobin Standard Set</b>	For Drabkin's Method (8, 10, 12, 15 & 18g/dL)	5 x 1 x 10 ml	BXCSTD09	LS
<b>Iron</b>	35.8 µmol/l (0.2 mg/dL)	10 x 5 ml	BXCSTD10	LS
<b>Iron</b>	107.4 µmol/l (0.6 mg/dL)	10 x 5 ml	BXCSTD11	LS
<b>Lactate</b>	4.44mmol/l (40mg/dL)	10 x 5 ml	BXCSTD12	LS
<b>Magnesium</b>	Referenced against NIST 909b (1.0 mmol/l/2.43mg/dL)	10 x 5 ml	BXCSTD13	LS
<b>Phosphorus</b>	1.61 mmol/l (5 mg/dL)	10 x 5 ml	BXCSTD14	LS
<b>Potassium</b>	Referenced against NIST 909b (0.5 mmol/l)	10 x 5 ml	BXCSTD15	LS
<b>Potassium</b>	Referenced against NIST 909b (5 mmol/l)	10 x 5 ml	BXCSTD16	LS
<b>Pyruvate</b>	2 mmol/l	10 x 5 ml	BXCSTD17	LS
<b>Sodium</b>	Referenced against NIST 909b (150.0 mmol/l/150 mEq/l)	10 x 5 ml	BXCSTD18	LS
<b>Total Protein</b>	Referenced against NIST 927d (60g/l (6.0 g/dL)	10 x 5 ml	BXCSTD19	LS
<b>Triglycerides</b>	Referenced against NIST 909b (2.28 mmol/l/200mg/dL)	10 x 5 ml	BXCSTD20	LS
<b>Urea</b>	Referenced against NIST 909b (8.33 mmol/l/50mg/dL)	10 x 5 ml	BXCSTD21	LS
<b>Uric Acid</b>	Referenced against NIST 909b (595 µmol/l/10mg/dL)	10 x 5 ml	BXCSTD22	LS
<b>Urinary Copper Standard</b>		10 x 5 ml	BXCSTD25	LS
<b>Urinary/CSF Protein Standard</b>	Referenced against NIST 927d (1g/l)	10 x 5 ml	BXCSTD23	LS





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## **SECTION 3** **BLOOD GAS** **& ELECTROLYTES**

Oxygen and Carbon Dioxide in the blood is tightly regulated by the body as low oxygen levels (hypoxemia) can lead to several serious conditions and damages a person's vital organs, especially the heart and brain.

The Fortress Seraqual Blood Gas & Electrolytes Quality Controls contain values for ten parameters, with values assigned by European Reference Laboratories, covering pH, pCO<sub>2</sub>, pO<sub>2</sub> and electrolytes. Available in a liquid stable format for convenience and ease-of-use. The Fortress Blood Gas & Electrolyte 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	pCO <sub>2</sub> pH pO <sub>2</sub>	Total CO <sub>2</sub>
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Description	Size	Cat No.	Type
Blood Gas & Electrolyte Control Level 1	1 x 2.0 ml	BXC0108A	LS
Blood Gas & Electrolyte Control Level 2	1 x 2.0 ml	BXC0108B	LS
Blood Gas & Electrolyte Control Level 3	1 x 2.0 ml	BXC0108C	LS
Blood Gas & Electrolyte Control Level 1	10 x 2.0 ml	BXC0108D	LS
Blood Gas & Electrolyte Control Level 2	10 x 2.0 ml	BXC0108E	LS
Blood Gas & Electrolyte Control Level 3	10 x 2.0 ml	BXC0108F	LS

## Electrolyte Controls

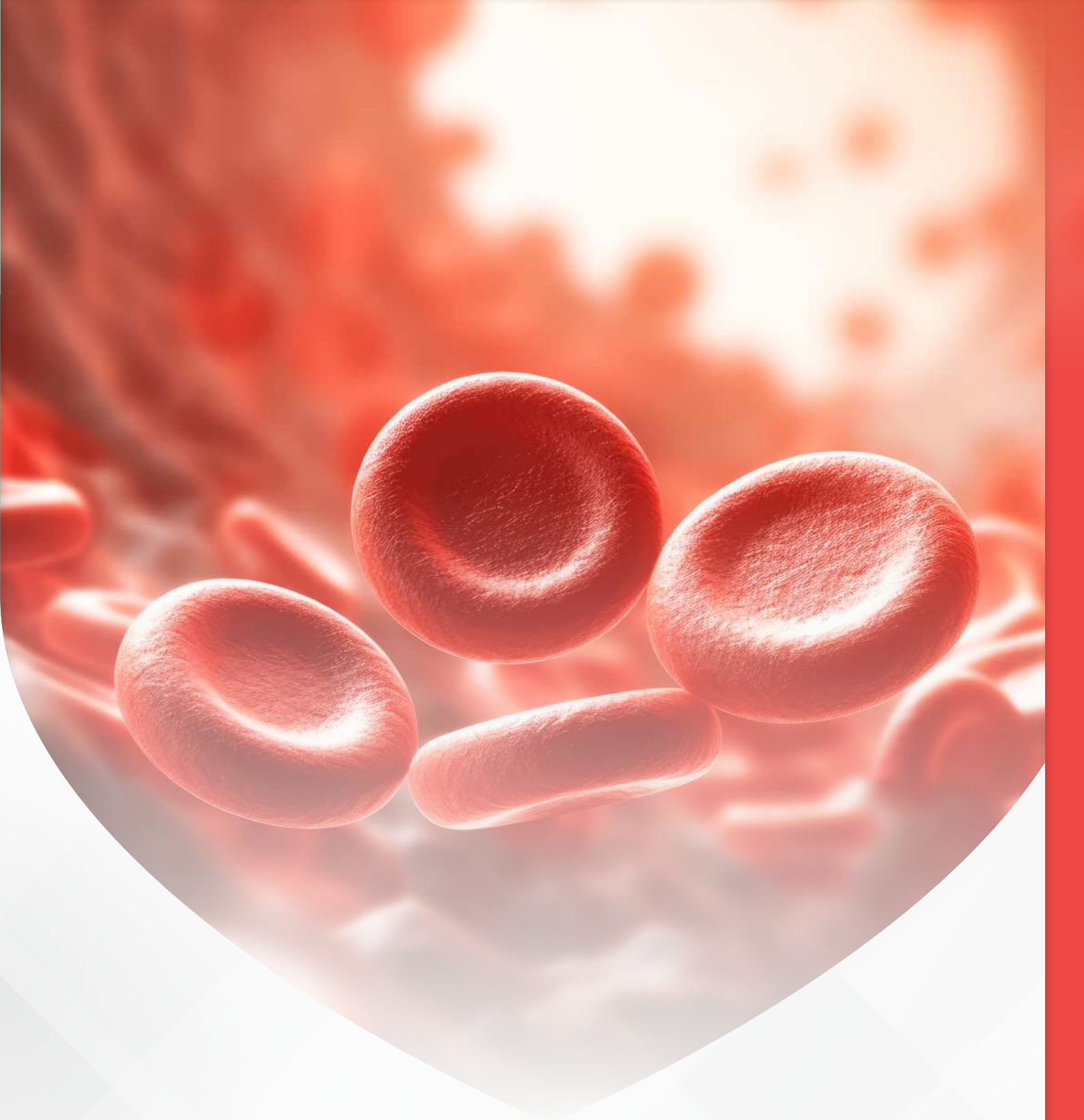


- Liquid stable format with a shelf life of 2 years when stored at 2-8 °C.
- Values are assigned by European reference Laboratories.
- Store at 2-8 °C. Do not freeze or expose to temperatures greater than 30 °C.
- When opened the analytes are stable for a period of 15 days when stored at 2-8 °C.

### Analytes

Chloride (ISE & Colorimetry)	Potassium (ISE & Colorimetry)	pH	Sodium (ISE & Colorimetry)
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Description	Size	Cat No.	Type
Electrolyte Control Low	5 x 5 ml	BXC0143A	LS
Electrolyte Control Normal	5 x 5 ml	BXC0144A	LS
Electrolyte Control High	5 x 5 ml	BXC0145A	LS



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## **SECTION 4** **BLOOD** **GROUPING**

The categorisation of blood according to type is vital in ensuring the total tranfunctional compatibility between receivers and donors. There are 43 blood group systems containing 345 antigens recognised by the International Society of Blood Transfusion however the most important blood groups in transfusion are the ABO blood group system and the RH blood group system.

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 Fortress Blood Grouping 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
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Description	Size	Cat No.	Type
ABO-Rhesus Blood Grouping Control Set	4 x 6ml	BXC0070A	Ready-to-Use





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## SECTION 5 CARDIAC CONTROLS

Cardiology is one of the largest specialities in medicine, which focuses on the heart and cardiovascular system. The fast and accurate diagnosis of a cardiac event can be life-saving.

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 Fortress Cardiac 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
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Description	Size	Cat No.	Type
Cardiac Control Set	3 x 1 x 1 ml	BXC0450B	Lyo.
Cardiac Control Set	3 x 1 x 2 ml	BXC0450A	Lyo.
Cardiac Control (Level 1)	5 x 1 ml	BXC0455B	Lyo.
Cardiac Control (Level 1)	5 x 2 ml	BXC0455A	Lyo.
Cardiac Control (Level 2)	5 x 1 ml	BXC0456B	Lyo.
Cardiac Control (Level 2)	5 x 2 ml	BXC0456A	Lyo.
Cardiac Control (Level 3)	5 x 1 ml	BXC0464B	Lyo.
Cardiac Control (Level 3)	5 x 2 ml	BXC0464A	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	1 x 2 ml	BXC0453A	Lyo.
CK/CK MB Control	5 x 2 ml	BXC0453B	Lyo.
CK/CK MB Control	10 x 2 ml	BXC0453C	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 (L1-L5)	5 x 1 ml	BXC0788A	Lyo.
D-DIMER Control Set (L1,L2)	2 x 1 ml	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 Set (5 Levels)	5 x 1 x 1 ml	BXC0691A	Lyo.
Homocysteine Control Set (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	1 x 1 x 0.5 ml	BXC0486A	Lyo.
Myoglobin Control	1 x 0.5 ml	BXC0487A	Lyo.

## NTProBNP Calibrators & Controls



- Liquid Stable (Ready-to-use) stable 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
NTProBNP Calibrator	1 x 1 ml	BXC0335A	LS
NTProBNP Control Series	6 x 1 x 1 ml	BXC0336A	LS

## 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 6 months, at 2-8°C.

Description	Size	Cat No.	Type
Troponin-T High Sensitivity Control	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	Size	Cat No.	Type
Troponin-I Control Set	2 x 1 x 1 ml	BXC0470A	Lyo.
Troponin-I Calibrator Set	6 x 1 x 1 ml	BXC0473A	Lyo.







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# 6

**SECTION 6**  
**CLINICAL**  
**CHEMISTRY**

The Fortress clinical chemistry range of controls are suitable for a range of clinical chemistry analysers. Available in both liquid stable and lyophilised formats, offering flexibility for your laboratory.

The Fortress Clinical Chemistry Controls are supplied with instrument and method specific assigned values.



Lyophilised



Liquid Frozen



Liquid Stable



100% Human Serum



Assayed Target Values Provided

## 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
<b>ADA Calibrator</b>	1 x 5 ml	BXC0209A	LS
<b>ADA Control (Level 1)</b>	1 x 5 ml	BXC0210A	LS
<b>ADA Control (Level 2)</b>	1 x 5 ml	BXC0216A	LS
<b>ADA Calibrator</b>	1 x 5 ml	BXC0217A	Lyo.
<b>ADA Control (Level 1)</b>	1 x 5 ml	BXC0218A	Lyo.
<b>ADA Control (Level 2)</b>	1 x 5 ml	BXC0219A	Lyo.

## Alcohol, Ammonia, Carbonate Calibrators & Controls



- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Reconstituted stability of 5 days at 2-8°C.

Description	Size	Cat No.	Type
<b>Alcohol, Ammonia, Carbonate Calibrator</b>	1 x 2 ml	BXC0492A	LS
<b>Alcohol, Ammonia, Carbonate Control (Level 1)</b>	1 x 2 ml	BXC0493A	LS
<b>Alcohol, Ammonia, Carbonate Control (Level 2)</b>	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
<b>Aldolase Calibrator</b>	3 x 1 ml	BXC0394A	Lyo.
<b>Aldolase Control Elevated</b>	3 x 1 ml	BXC0393A	Lyo.
<b>Aldolase Control Normal</b>	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
<b>Alpha-1-Acid Glycoprotein Calibrator</b>	2 x 1 ml	BXC0892A	LS
<b>Alpha-1-Acid Glycoprotein Control</b>	2 x 1 ml	BXC0891A	LS

## Alpha-1-Antitrypsin Calibrators &amp; 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
<b>Alpha-1-Antitrypsin Calibrator</b>	1 x 2 ml	BXC0711A	LS
<b>Alpha-1-Antitrypsin Control (L1 &amp; L2)</b>	2 x 1 x 2ml	BXC0712A	LS

## Aluminium Calibrators &amp; 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
<b>Aluminium Control Level 1</b>	1 x 1 ml	BXC0696A	LS
<b>Aluminium Control Level 2</b>	1 x 1 ml	BXC0697A	LS
<b>Aluminium Control Level 3</b>	1 x 1 ml	BXC0698A	LS

## Ammonia Controls &amp; 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
<b>Ammonia Calibrator</b>	3 x 2 ml	BXC0373A	LS
<b>Ammonia Control High</b>	3 x 2 ml	BXC0375A	LS
<b>Ammonia Control Low</b>	3 x 2 ml	BXC0374A	LS

## Angiotensin Converting Enzyme (ACE) Controls &amp; 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
<b>Angiotensin Converting Enzyme (ACE) Calibrator</b>	3 x 1 ml	BXC0177A	Lyo.
<b>Angiotensin Converting Enzyme (ACE) Control (L1)</b>	3 x 1 ml	BXC0178A	Lyo.
<b>Angiotensin Converting Enzyme (ACE) Control (L2)</b>	3 x 1 ml	BXC0179A	Lyo.

## Bile Acid 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
<b>Bile Acid Calibrator</b>	1 x 1 ml	BXC0582A	LS

## Blood Alcohol Controls &amp; 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
<b>Blood Alcohol Calibrator</b>	1 x 2 ml	BXC0488A	LS
<b>Blood Alcohol Control (Level 1)</b>	1 x 2 ml	BXC0489A	LS
<b>Blood Alcohol Control (Level 2)</b>	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
<b>Bilirubin Calibrator</b>	3 x 1ml	BXC0319A	Lyo.
<b>Bilirubin Control</b>	1 x 1ml	BXC0318A	Lyo.
<b>Bilirubin Control</b>	3 x 1ml	BXC0318B	Lyo.
<b>Bilirubin Calibrator, Liquid Stable</b>	2 x 1ml	BXC0303A	LS
<b>Bilirubin Control Set, Liquid Stable</b>	2 x 1 x 1ml	BXC0304A	LS
<b>Bilirubin Control Set, Paediatric, Liquid Stable</b>	2 x 1 x 1ml	BXC0305A	LS
<b>Bilirubin Control, Liquid Stable</b>	1 x 1ml	BXC0306A	LS
<b>Bilirubin Control, Liquid Stable</b>	3 x 1ml	BXC0306B	LS
<b>Bilirubin Control, Liquid Stable</b>	1 x 1 ml	BXC0307A	LS
<b>Bilirubin Control, Liquid Stable</b>	3 x 1 ml	BXC0307B	LS

## 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

<b>Enzymes</b> ALP ALT(GPT) Total Amylase AST(GOT) CK NAC Gamma GT HBDH LDH Lipase Prostatic Acid - Phosphatase	Total Acid Phosphatase  <b>Substrates</b> Albumin Bile Acids Bilirubin Direct Bilirubin Total Calcium Cholesterol Copper Creatinine	D3- Hydroxybutyrate Glucose HDL Cholesterol Iron Iron/TIBC Inorganic Phosphorous Lactate LDL Cholesterol Total Protein Triglycerides Urea	Uric Acid Zinc  <b>Electrolytes</b> Chloride Lithium Magnesium Potassium Sodium
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Description	Size	Cat No.	Type
<b>Calibration Serum</b>	5 x 3 ml	BXC0321L	Lyo.
<b>Calibration Serum</b>	10 x 3 ml	BXC0321M	Lyo.

## CO<sub>2</sub> (Bicarbonate) Controls & Calibrators



- Values are assigned by in house methods using Enzymatic CO<sub>2</sub> kits.
- The CO<sub>2</sub> (Bicarbonate) calibrator is intended for calibrating the Fortress CO<sub>2</sub> (Bicarbonate) kit.
- CO<sub>2</sub> (Bicarbonate) Calibrator & Controls are Liquid Stable.
- Stable to expiry at 2-8 °C.
- Two months open vial stability at 2-8 °C.

Description	Size	Cat No.	Type
<b>CO<sub>2</sub> (Bicarbonate) Calibrator</b>	3 x 2 ml	BXC0155A	LS
<b>CO<sub>2</sub> (Bicarbonate) Control Low</b>	3 x 2 ml	BXC0156A	LS
<b>CO<sub>2</sub> (Bicarbonate) Control High</b>	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		
<b>Proteins</b>	<b>Electrolytes</b>	<b>Substrates</b>
IgA IgG IgM Total Protein	Chloride Lactate Sodium	Albumin Glucose

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 Controls

- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 14 days, at 2-8°C.

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

## 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
<b>Cystatin C Calibrator Set (6 Levels)</b>	6 x 1 ml	BXC0334A	LS
<b>Cystatin C Control (Level 1)</b>	2 x 1 ml	BXC0333A	LS
<b>Cystatin C Control (Level 2)</b>	2 x 1 ml	BXC0333B	LS

## D3-Hydroxybutyrate 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
<b>D3-Hydroxybutyrate Calibrator</b>	1 x 1 ml	BXC0544A	LS
<b>D3-Hydroxybutyrate Control (Level 1)</b>	1 x 1 ml	BXC0543A	LS
<b>D3-Hydroxybutyrate Control (Level 2)</b>	1 x 1 ml	BXC0543B	LS

## 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
<b>D-DIMER Calibrator Set (L1-L5)</b>	5 x 1 ml	BXC0788A	LS
<b>D-DIMER Control Set (L1, L2)</b>	5 x 1 ml	BXC0789A	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
<b>Ferritin Calibrator</b>	1 x 1 ml	BXC0445A	LS
<b>Ferritin Calibrator Set</b>	6 x 1 x 1 ml	BXC0445B	LS
<b>Ferritin Control (Level 1)</b>	3 x 1 ml	BXC0443A	LS
<b>Ferritin Control (Level 2)</b>	3 x 1 ml	BXC0444A	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.
- Lyophilised 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
<b>G-6-PDH Control (Normal)</b>	1 x 1 ml	BXC0573B	Lyo.
<b>G-6-PDH Control (Intermediate)</b>	1 x 1 ml	BXC0572B	Lyo.
<b>G-6-PDH Control (Deficient)</b>	1 x 1 ml	BXC0572B	Lyo.



## 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	1 x 3 ml	BXC0315B	Lyo.
HDL/LDL Calibrator	5 x 3 ml	BXC0315C	Lyo.
HDL/LDL Calibrator	5 x 1 ml	BXC0315D	Lyo.
HDL/LDL Calibrator	1 x 1 ml	BXC0315E	Lyo.
HDL/LDL Calibrator	3 x 1 ml	BXC0315F	Lyo.

## Human Assayed Controls



- Approximately 52 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.
- Human serum based – same matrix as samples.
- Reconstituted stability of 7 days at 2-8 °C, or 4 weeks at -20 °C.

### Analytes

Enzymes	Substrates		Immunoassays
Alkaline Phosphatase	Albumin	Total Protein	Total T3
ALT (GPT)	Bile Acids	Triglycerides	Total T4
AST (GOT)	Bilirubin Direct	UIBC	Cortisol Vit Biz
Cholinesterase	Bilirubin Total	Urea	Folate
CK NA	Calcium	Uric Acid	Drugs
Gamma GT	Cholesterol	Zinc	Digoxin
HBDH	Copper		Gentamicin
LDH	Creatinine	<b>Electrolytes</b>	Paracetamol
Lipase	D3- Hydroxybutyrate	Bicarbonate	Salicylate
Pancreatic Amylase	Glucose	Chloride	Theophiline
Total Acid	HDL Cholesterol	Lithium	Tobramycin
<b>Phosphatase</b>	Iron	Magnesium	
Prostatic Acid-Phosphatase	Iron/TIBC	Potassium	
Total Amylase	Inorganic Phosphorous	Sodium	
	LDL Cholesterol		

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 Precision Controls



- A vast range of clinical chemistry parameters are provided with guidance values.
- Method based values with reference traceability provided.
- Stable to expiry at 2-8 °C.
- Human serum based – same matrix as samples.
- Reconstituted stability of 7 days at 2-8 °C, or 4 weeks at -20 °C.
- Methods and reference traceability.

### Analytes

Enzymes	Substrates		Immunoassays
Alkaline Phosphatase	Albumin	Total Protein	Total T3
ALT (GPT)	Bile Acids	Triglycerides	Total T4
AST (GOT)	Bilirubin Direct	UIBC	Cortisol Vit Biz
Cholinesterase	Bilirubin Total	Urea	Folate
CK NA	Calcium	Uric Acid	Drugs
Gamma GT	Cholesterol	Zinc	Digoxin
HBDH	Copper		Gentamicin
LDH	Creatinine	<b>Electrolytes</b>	Paracetamol
Lipase	D3- Hydroxybutyrate	Bicarbonate	Salicylate
Pancreatic Amylase	Glucose	Chloride	Theophiline
Total Acid	HDL Cholesterol	Lithium	Tobramycin
<b>Phosphatase</b>	Iron	Magnesium	
Prostatic Acid-Phosphatase	Iron/TIBC	Potassium	
Total Amylase	Inorganic Phosphorous	Sodium	
	LDL Cholesterol		

Description	Size	Cat No.	Type
Human Precision Control (Level 1)	10 x 5ml	BXC0314A	Lyo.
Human Precision Control (Level 2)	10 x 5ml	BXC0314B	Lyo.
Human Precision Control (Level 1)	5 x 5ml	BXC0314C	Lyo.
Human Precision Control (Level 2)	5 x 5ml	BXC0314D	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 3 ml	BXC0753A	Lyo.

## Immunoglobulin Calibrator



- Liquid Stable (Ready-to-use) stable to expiry at 2-8 °C.
- Open vial stability of 60 days, at 2-8°C.
- Prepared from Human Serum.

### Analytes

	IgA	IgC	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

## 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.

## NTProBNP Calibrators & Controls



- Liquid Stable (Ready-to-use) stable 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
NTProBNP Calibrator	1 x 1ml	BXC0335A	Lyo.
NTProBNP Control Series	6 x 1 x 1ml	BXC0336A	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) Calibrator





- 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	3 x 2 ml	BXC0325B	-
RF (Multi-Point) Calibrator	1 x 2 ml	BXC0612A	-

## TIBC 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
TIBC Calibrator (2 Levels)	2 x 1 x 1 ml	BXC0238A	LS

## 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.





## SECTION 7

# 7

### COAGULATION/ HAEMOSTASIS

**Haemostasis refers to the process that leads to normal blood clotting in response to an injury. 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 Fortress Haemostasis 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**

**Fortress Diagnostics has extensive experience and expertise in the production of customised quality controls for EQA programmes, and manufacturing 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.**



Lyophilised



Liquid Frozen



Liquid Stable



100% Human Serum



Assayed Target Values Provided

## Customised Quality Controls

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**



### Cost Effective

Fortress Diagnostics throughout the global market. Over 200 analytes can be customized in the required matrix, with concentrations, levels and volumes.



### 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









## SECTION 9 DIABETES

Diabetes is a chronic disease characterised by insulin resistance either due to the pancreas's inability to produce enough insulin or due to the body's inability to use the insulin it produces effectively. The Fortress Diabetes Controls are lyophilised for enhanced stability, and are ideal for both clinical and research use. The Fortress Diabetes 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 (2 Levels) 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)	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)	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 Levels) Inc. HPLC	2 x 2 x 0.5 ml	BXC0675A	Lyo.
HbA1c Control Set (2 Levels)	<i>For use with BXC0670</i> 2 x 1 x 0.5 ml	BXC0669A	Lyo.

## Thalassaemia (α & β) 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 (α & β) Control (Level 1)	2 x 0.5 ml	BXC0665A	Lyo.
Thalassaemia (α & β) Control (Level 2)	2 x 0.5 ml	BXC0665B	Lyo.





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# 10

**SECTION 10**  
**DRUGS**  
**OF ABUSE**



**Drug abuse refers to the use of illegal, prescription, or over-the-counter drugs for purposes other than those for which they are meant to be used, or in excessive amounts.**

**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 Fortress Drugs of Abuse 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	-

### Analytes

Amphetamines Barbiturates Benzodiazepines	Cannabinoids Cocaine TCA	LSD Methadone Opiates	Phencyclidine Propoxyphene
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Description	Size	Cat No.	Type
Drugs of Abuse Control (Level 1)	10 x 10 ml	BXC0784A	LS
Drugs of Abuse Control (Level 2)	10 x 10 ml	BXC0785A	LS
Drugs of Abuse Control (Level 3)	10 x 10 ml	BXC0786A	LS



# 11

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**SECTION 11**  
**HAEMATOLOGY**

**Haematology is the study of blood and blood disorders. 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 Fortress Haematology 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.

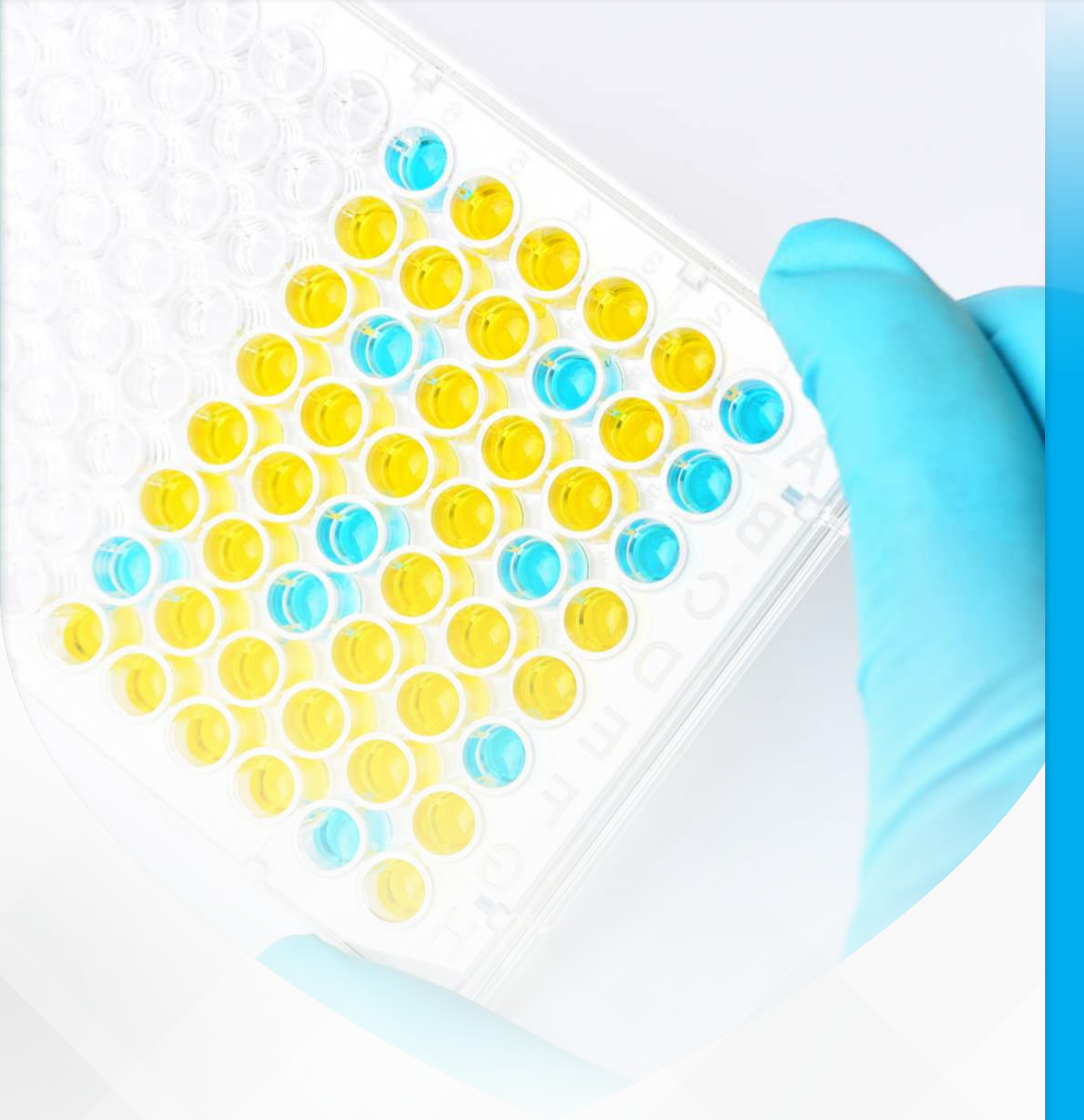
### Values Available for the Following Analysers

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 % & # Mid Cells
HCT	MPV	Total RBC	
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 2)	3 x 3 ml	HAEMC003	LS
Haematology Control, 3- LEVELS	3 x 3 x 3 ml	HAEMC004	LS



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## **SECTION 12** **IMMUNOASSAY/ INFECTIOUS DISEASES**



**Immunoassay testing works on the principle of antigen-antibody reaction in the detection of disease. 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 Fortress Immunoassay Controls are supplied with instrument and method specific assigned values.**



Lyophilised



Liquid Frozen



Liquid Stable



100% Human Serum



Assayed Target Values Provided

## Immunoassay

### 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.
- Over 60 analytes.

#### Analytes

<b>Thyroid Hormones</b> Total T3 Total T4 Free T3 Free T4 TSH T-uptake  <b>Fertility Hormones</b> LH FSH Prolactin HCG	<b>Tumor Markers</b> CEA AFP PSA fPSA Cardiac Markers Digoxin  <b>Growth Deficiency</b> Human Growth Hormone  <b>Allergy</b> IgE	<b>Diabetes</b> C-peptide Insulin  <b>Anaemia</b> Ferritin  <b>Steroids</b> 17-OH Progesterone Cortisol Unconjugated Estriol	Progesterone Testosterone DHEA-S
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Description	Size	Cat No.	Type
Immunoassay Control (Level 1)	4 x 3ml	BXC0363A	Lyo.
Immunoassay Control (Level 2)	4 x 3ml	BXC0363B	Lyo.
Immunoassay Control (Level 3)	4 x 3ml	BXC0363C	Lyo.
Immunoassay Tri-Level Control	3 x 4 x 3 ml	BXC0363D	Lyo.

### Immunoassay Speciality



- Lyophilised 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	Oestercalcin PTH Calcitonin
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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.
- Compatible 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  $\geq 20$  IU/ml, making it ideal for sensitivity testing of qualitative assays.

Description	Size	Cat No.	Type
hCG Serum Control	1 x 1 ml	BXC0682A	Lyo.
hCG Serum Control	1 x 1 ml	BXC0681A	Lyo.
hCG Serum Control	1 x 5 ml	BXC0683A	Lyo.

## 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.

## 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 x 1 ml	BXC0475A	Lyo.
VITAMIN-D Control Set	2 x 1 ml	BXC0474A	Lyo.

Infectious diseases are illnesses caused by bacteria, viruses, and fungi, that enter the body, multiply and cause infection. Some infectious diseases are communicable, meaning that they are capable of spreading from one person to another.

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 Fortress Infectious Diseases Controls are supplied with instrument and method specific assigned values.



Lyophilised



Liquid Frozen



Liquid Stable



100% Human Serum



Assayed Target Values Provided

## Infectious Diseases

### 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

### 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



## 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.

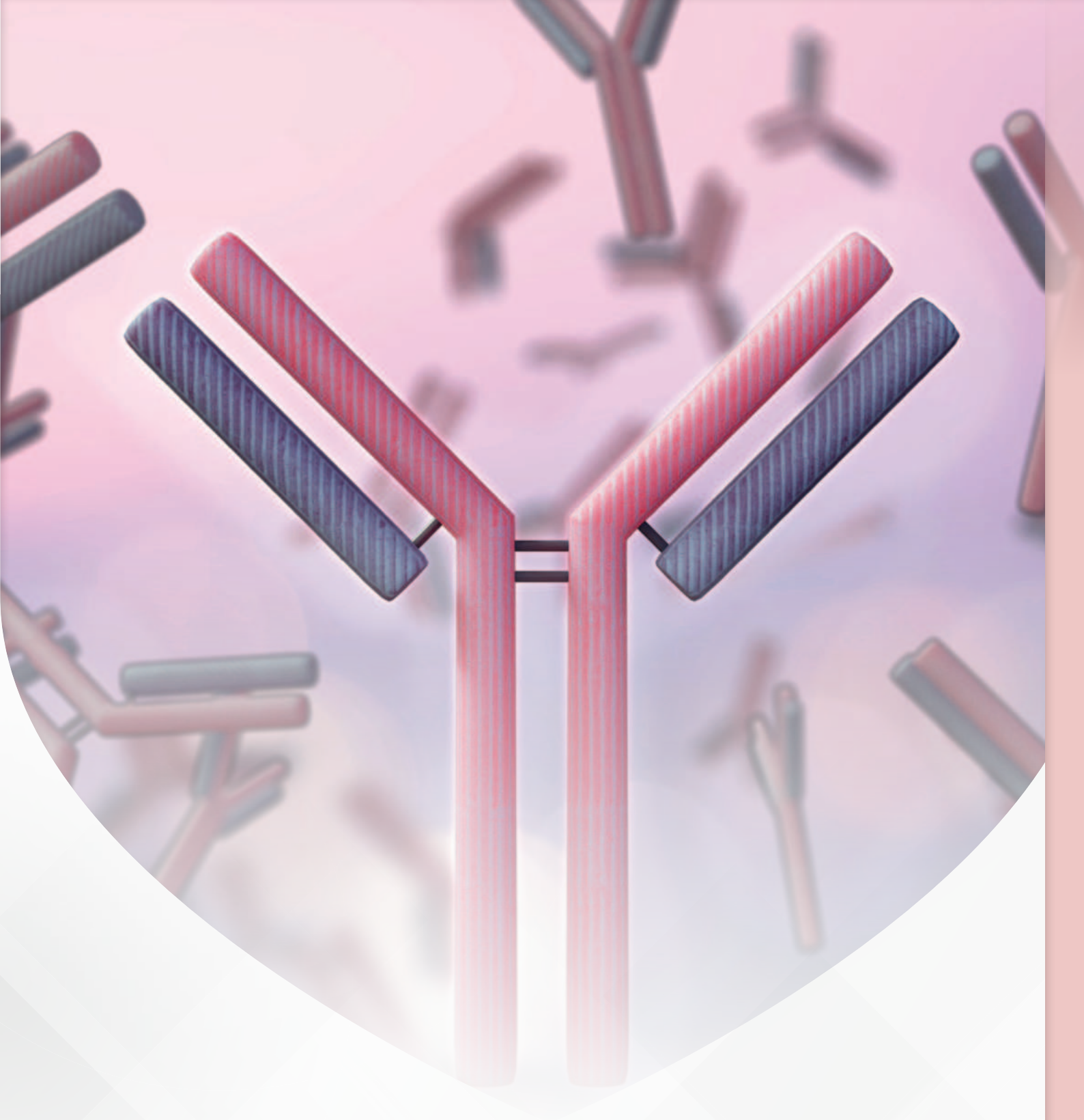
### Analytes

<b>IgG</b> Toxoplasma Gondii IgG Rubella IgG CMV IgG HSV-1 IgG	HSV -2 IgG VZV IgG EBV IgG Syphilis IgG	<b>IgM</b> Toxoplasma Gondii IgM Rubella IgM CMV IgM HSV-1 IgM	HSV-2 IgM  <b>Syphilis RPR</b>
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Description	Size	Cat No.	Type
TORCH Control Negative	3 x 1 ml	BXC0799A	LS
TORCH IgG Control Positive	3 x 1 ml	BXC0799B	LS
TORCH IgM Control Positive	5 x 1 x 1 ml	BXC0799C	LS







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## SECTION 13 IMMUNOLOGY/ PROTEINS

**Immunology is the study of diseases caused by disorders of the immune system.**

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
<b>APO A1/B Calibrator Series</b>	6 x 1 x 1 ml	BXC0413A	Lyo.

### 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
<b>ASO (Single Point) Calibrator</b>	1 x 1 ml	BXC0323A	LS
<b>ASO (Single Point) Calibrator</b>	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
<b>ASO (Single Point) Calibrator</b>	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
<b>CRP (Single Point) Calibrator</b>	3 x 1 ml	BXC0324A	LS
<b>CRP (Multi Point) Calibrator</b>	6 x 1 x 1 ml	BXC0324B	LS
<b>CRP (ULTRA SENSITIVE) Low Control</b>	3 x 1 ml	BXC0325A	LS
<b>CRP (ULTRA SENSITIVE) Standard Set</b>	5 x 1 x 0.5 ml	BXC0327A	LS
<b>CRP Control (Level 1)</b>	5 x 1 ml	BXC0326A	LS
<b>CRP Control (Level 2)</b>	5 x 1 ml	BXC0326B	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
<b>ESR Control (Level 1)</b>	2 x 10 ml	BXC0631A	LS
<b>ESR Control (Level 2)</b>	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
<b>IgE Calibrator</b>	1 x 1 ml	BXC0752A	Lyo.
<b>IgE Control Set (Level 1 &amp; Level 2)</b>	2 x 2 x3 ml	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
a2-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	
Beta-2-Microglobulin	Haptoglobin	Rheumatoid Factor	

Description	Size	Cat No.	Type
<b>Protein Control (Level 1)</b>	1 x 1 ml	BXC0638A	LS
<b>Protein Control (Level 2)</b>	1 x 1 ml	BXC0639A	LS
<b>Protein Control Set (L1 &amp; L2)</b>	2 x 1 x 1 ml	BXC0640A	LS
<b>Protein Control (Level 1)</b>	1 x 2 ml	BXC0641A	LS
<b>Protein Control (Level 2)</b>	1 x 2 ml	BXC0642A	LS
<b>Protein Control Set (L1 &amp; L2)</b>	2 x 1 x 2 ml	BXC0642A	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
<b>Retinol Binding Protein Control</b>	1 x 1 ml	BXC0995A	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
<b>RF (Multi-Point) Calibrator</b>	3 x 2 ml	BXC0325B	LS
<b>RF (Multi-Point) Calibrator</b>	1 x 2 ml	BXC0612A	LS

## Specific Protein Calibrators

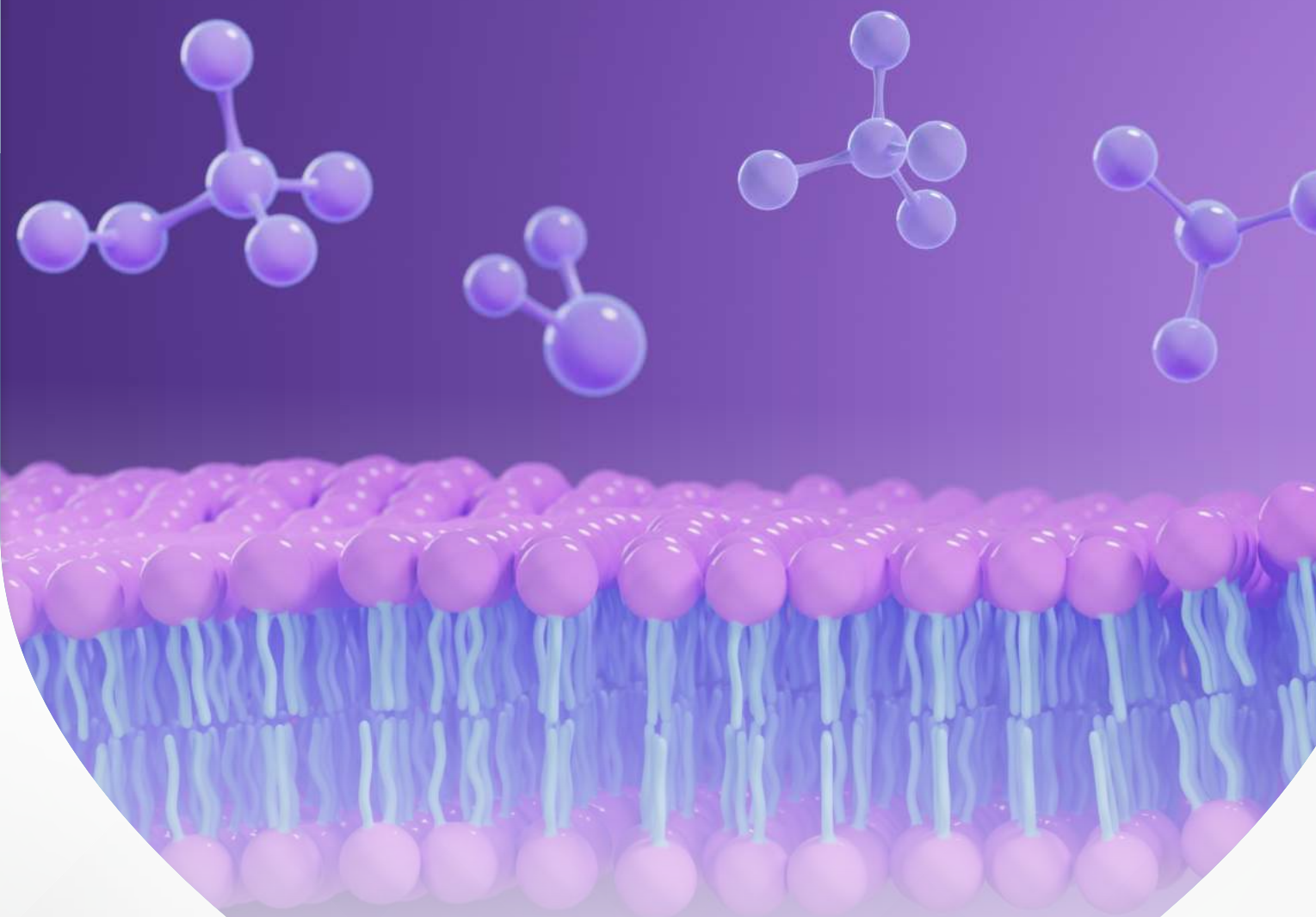


- Fortress Specific Protein Calibrator is a single level multi-analyte calibrator for use in automated systems with auto dilution facility.
- Fortress Specific Protein Calibrator set is a multi analyte multi level calibrator set for calibrating protein assays.
- Both the Calibrators are presented in 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
a2-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	
Beta-2-Microglobulin	Haptoglobin	Rheumatoid Factor	

Description	Size	Cat No.	Type
<b>Specific Protein Calibrator</b>	1 x 2 ml	BXC0644A	LS
<b>Specific Protein Calibrator Set</b>	6 x 1 x 1 ml	BXC0646A	LS



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# 14

**SECTION 14**  
**LIPIDS**

**Lipids are fatty compounds that perform a variety of functions within the body. The Fortress Lipids Controls are lyophilised for enhanced stability and are suitable for automated and semi-automated systems. The multi-analyte controls offer test menu consolidation. The Fortress Lipid 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	1 x 3 ml	BXC0315B	Lyo.
HDL/LDL Calibrator	3 x 3 ml	BXC0315C	Lyo.
HDL/LDL Calibrator	3 x 1 ml	BXC0315D	Lyo.
HDL/LDL Calibrator	1 x 1 ml	BXC0315E	Lyo.
HDL/LDL Calibrator	3 x 1 ml	BXC0315F	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 Elevated (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 ml	BXC0316A	Lyo.
Lipid Control Normal (Cholesterol, Triglycerides, APO A1, APO B, HDL, LDL)	3 x 1 ml	BXC0330A	Lyo.
Lipid Control Low (Cholesterol, Triglycerides, APO-A, APOB, HDL, LDL)	3 x 1 ml	BXC0317A	Lyo.



## **SECTION 15** **MATERNAL** **SCREENING**



**Maternal screening is used to detect some birth defects in pregnant women at various stages prior to birth.**

**The Fortress Maternal Screening Controls are available in a lyophilised format offering enhanced stability and are 100% human serum based to negate matrix effects. The Fortress Maternal Screening Controls are supplied with instrument and method specific assigned values.**



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.
- Compatible 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.

## Maternal Screening Control

For screening of Down's syndrome & Spina Bifida compatible for use on most clinical chemistry systems including Immunoassay systems AFP, F $\beta$ , hCG, Total hCG, UnConjugated Estriol, Inhibin-A, PAPP-A

- 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.



# 16

**SECTION 16**  
**NEONATAL**  
**SCREENING**

Neonatal screening is used to detect conditions that are treatable, but are not clinically evident in infants shortly after birth. The Fortress Neonatal Screening Controls are dried blood spot (DBS) which ensures accurate, reliable and repeatable results.



Lyophilised



Liquid  
Frozen



Liquid  
Stable



100% Human  
Serum



Assayed Target  
Values Provided

### BCAA (Leucine) Calibrators & Controls

Description	Cat No.	Type
BCAA (Leucine) Calibrator	BXC0067A	Dry Blood Spot
BCAA (Leucine) (Level 1)	BXC0068A	Dry Blood Spot
BCAA (Leucine) (Level 2)	BXC0068B	Dry Blood Spot
BCAA (Leucine) (Level 3)	BXC0068C	Dry Blood Spot
BCAA (Leucine) (Level 4)	BXC0068D	Dry Blood Spot
BCAA (Leucine) (Control Set) L1/L2/L3/L4	BXC0069A	Dry Blood Spot

### Dried Bloodspot Calibrators on Filter Paper for Neonatal Screening

Description	Cat No.	Type
Dried Bloodspot Calibrators on filter paper for Neonatal Screening	BXC0059A	Blood Spot

### 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 (Intermediate)	1 x 1 ml	BXC0572B	Lyo.
G-6-PDH Control (Deficient)	1 x 1 ml	BXC0572B	Lyo.

### PKU Calibrators & Controls

#### 4 Levels of Phenylalanine.

Description	Cat No.	Type
PKU Calibrator	BXC0064A	Dry Blood Spot
PKU (Level 1)	BXC0065A	Dry Blood Spot
PKU (Level 2)	BXC0065B	Dry Blood Spot
PKU (Level 3)	BXC0065C	Dry Blood Spot
PKU (Level 4)	BXC0065D	Dry Blood Spot
PKU (Control Set) L1/L2/L3/L4	BXC0066A	Dry Blood Spot

### Total Galactose Calibrators & Controls

Description	Cat No.	Type
Total Galactose Calibrator	BXC0060A	Dry Blood Spot
Total Galactose (Level 1)	BXC0061A	Dry Blood Spot
Total Galactose (Level 2)	BXC0061B	Dry Blood Spot
Total Galactose (Level 3)	BXC0061C	Dry Blood Spot
Total Galactose (Level 4)	BXC0061D	Dry Blood Spot
Total Galactose (Control Set) L1/L2/L3/L4	BXC0062A	Dry Blood Spot



## **SECTION 17** **PAEDIATRIC** **CONTROLS**



**Paediatric testing is used to detect underlying medical conditions in children such as diabetes.**

**The Fortress Paediatric Control is lyophilised for enhanced stability and ensures accuracy and precision. Fortress Paediatric Controls is 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.



# 18

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## SECTION 18 SPECIALITY CONTROLS

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 Fortress Serum Indices 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

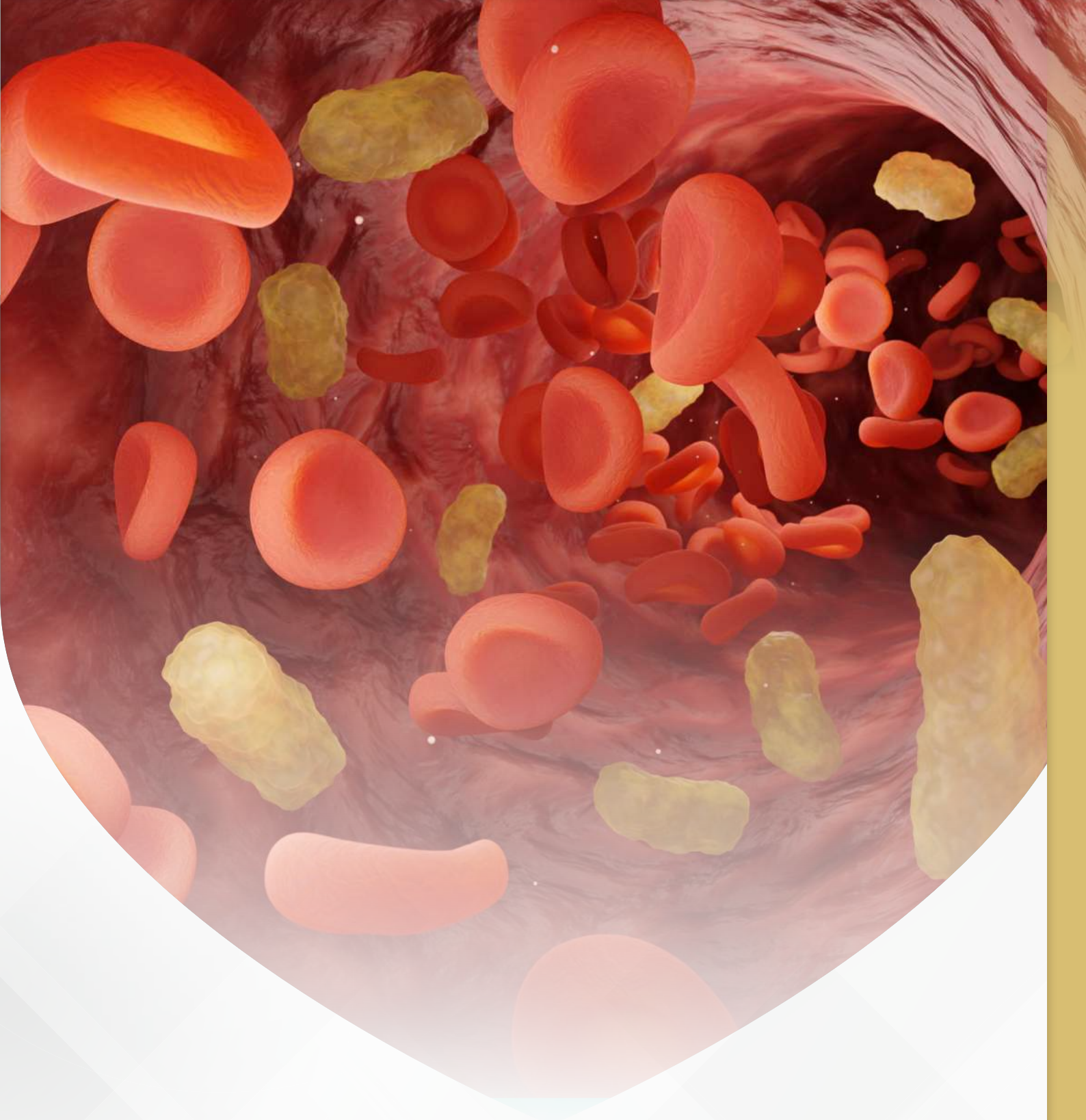
## Serum Indices (LIH)



- Lyophilised for long shelf life.
- 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	Size	Cat No.	Type
Haemolytic	4 x 5 ml	BXC0600E	Liquid Frozen
Icteric	4 x 5 ml	BXC0600D	Liquid Frozen
Lipaemic	4 x 5 ml	BXC0600C	Liquid Frozen
Normal	4 x 5 ml	BXC0600B	Liquid Frozen
LINH	4 x 1 x 5 ml	BXC0600A	Liquid Frozen
LINH	3 x 4 x 5 ml	BXC0600F	Liquid Frozen
Haemolytic	4 x 5 ml	BXC0601E	Lyo.
Icteric	4 x 5 ml	BXC0601D	Lyo.
Lipaemic	4 x 5 ml	BXC0601C	Lyo.
Normal	4 x 5 ml	BXC0601B	Lyo.
LINH	4 x 1 x 5 ml	BXC0601A	Lyo.
LINH	3 x 4 x 5 ml	BXC0601F	Lyo.



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# 19

**SECTION 19**  
**THALASSAEMIA**  
**CONTROLS**



**Thalassaemia testing is used to detect a group of inherited disorders that affect the amount of haemoglobin a person is able to produce.**

**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	
Thalssaemia (α & β) Control Level 1		2 x 0.5ml	BXCO665A	Lyo.	
Thalssaemia (α & β) Control Level 2		2 x 0.5ml	BXCO665B	Lyo.	
HbA2 Control Set		2 x 2 x 0.5ml	BXCO778A	Lyo.	



---

# 20

**SECTION 20**  
**THERAPEUTIC**  
**DRUGS**

**Therapeutic drug monitoring (TDM) is used to measure the amount of specific prescribed medications within the blood. The absorption and metabolism rate varies from person to person and as such, it is easy to over or under prescribe medication. Consequently, certain medications need to be closely monitored.**

**The Fortress Therapeutic Drug Controls are manufactured from 100% human serum to negate matrix 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 Caffeine Carbamazepine Cyclosporine	Digoxin Ethosuxamide Gentamicin Lithium	Methotrexate Paracetamol Phenobarbitone Phenytoin	Primidone Salicylate Theophylline Tobramycin	Valproic Acid Vancomycin
---	--	--	---	-----------------------------

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



# 21

**SECTION 21**  
**URINE**  
**CONTROLS**



**Urinalysis is a series of tests involving urine, used to detect for common conditions or diseases.**

**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
<b>Citrate (Urinary) Calibrator [200mg/L]</b>	2 x 1 ml	BXC0136A	LS
<b>Citrate (Urinary) Control (Level 1) [50mg/L]</b>	2 x 1 ml	BXC0137A	LS
<b>Citrate (Urinary) Control (Level 2) [600mg/L]</b>	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
<b>Microalbumin Calibrator Series</b>	5 x 1 ml	BXC0329A	LS
<b>Microalbumin Control (Level 1)</b>	2 x 1 ml	BXC0328A	LS
<b>Microalbumin Control (Level 2)</b>	5 x 1 ml	BXC0328B	LS

## 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
<b>Oxalate (Urinary) Calibrator [0.5 mmol/L]</b>	1 x 5 ml	BXC0147A	LS
<b>Oxalate (Urinary) Control (Level 1) [0.2 mmol/L]</b>	1 x 5 ml	BXC0148A	LS
<b>Oxalate (Urinary) Control (Level 2) [0.7 mmol/L]</b>	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

SHIAA Amylase Calcium Chloride Copper Cortisol	Creatinine Dopamine Epinephrine Glucose Magnesium Metanephrine	Microalbumin Norepinephrine Normetanephrine Osmolality Oxalate Inorganic Phosphorous	Potassium Protein Sodium Urea Uric Acid VMA
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Description	Size	Cat No.	Type
<b>Urine Assayed Control (Level 1)</b>	10 x 10 ml	BXC0661A	Lyo.
<b>Urine Assayed Control (Level 2)</b>	10 x 10 ml	BXC0661B	Lyo.



## Urine Strip Controls

### For Urine and hCG Strips Only

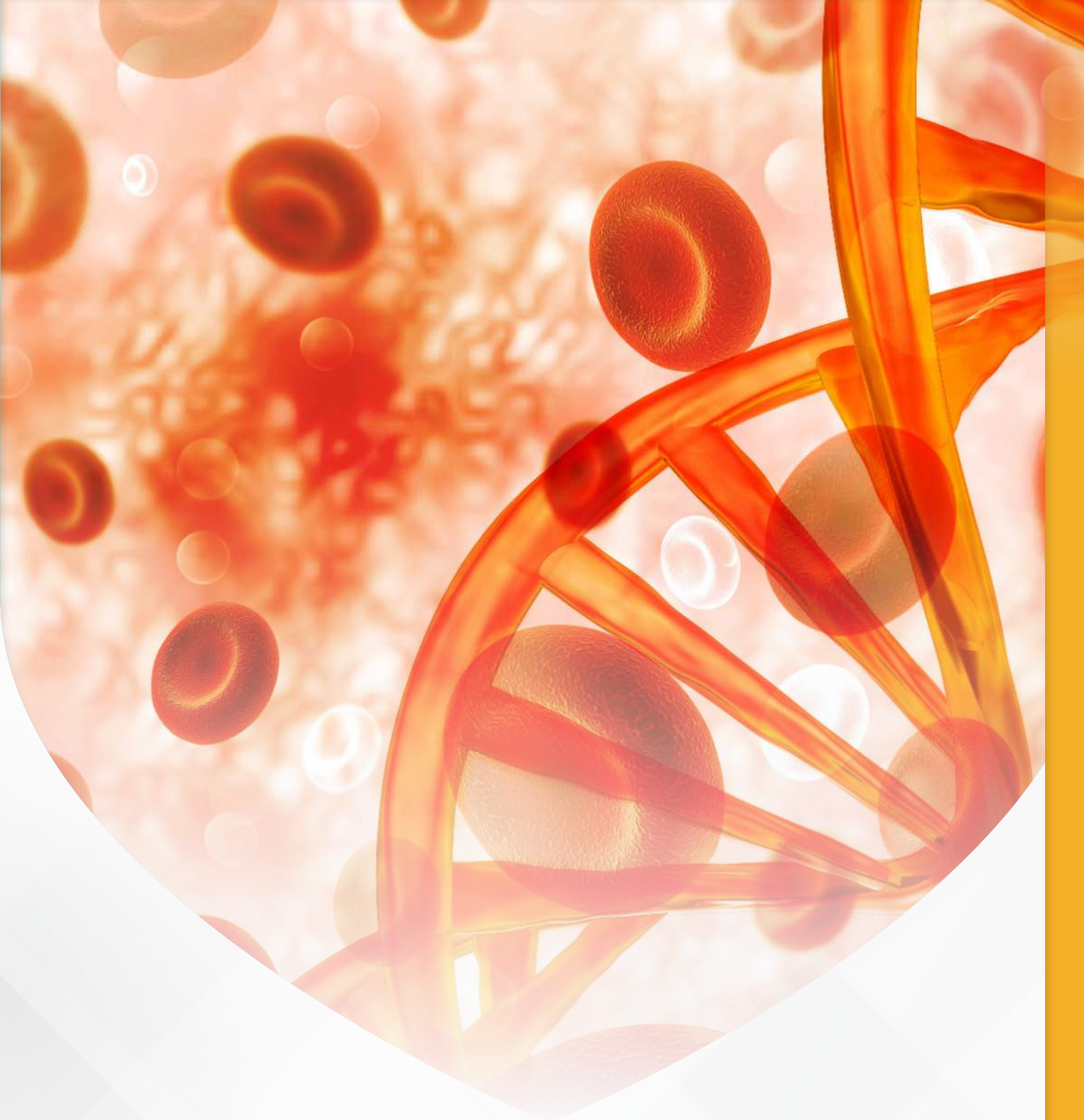
- Fortress urine Strip controls are designed for quality control of urine strips.
- Values are assigned by in house methods.
- The Fortress Urine Strip controls are provided in a liquid stable format with a increased stability, stable up to expiry at 2-8 °C.
- Open vial stability of 30 days when stored 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 Bilirubin Creatinine Blood	Glucose hCG Ketones Leukocytes	Nitrites pH Protein Specific Gravity	Urobilinogen
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Description	Size	Cat No.	Type
Urine Strip Control (Level 1 & 2)	2 x 3 x 12 ml	BXC0663A	LS





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## SECTION 22

# 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 h of subarachnoid bleeding, reach peak levels after 36–48 h, 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 Ltd. 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

Bilirubin

Oxyhaemoglobin

Description	Size	Cat No.	Type
Xanthochromia Positive Control	3 x 1 ml	BXC03555A	Lyo.



---

# 23

**SECTION 23**  
**IQC**  
**PROGRAMMES**

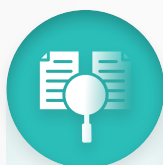
The Seraqual 365 IQC Management Software is a peer data QC programme designed for use with Seraqual Controls. It provides a cost effective and comprehensive package for labs who need to manage their daily QC activities on a centralized platform in real time.

## Seraqual 365



# 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 condensed options 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 to include Histogram and Levey –Jennings
- **Exceptions reports** so data from a specified date range can be reviewed quickly
- **Statistical Comparison Report** can be in a specified date range and at either 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.

# Software Overview

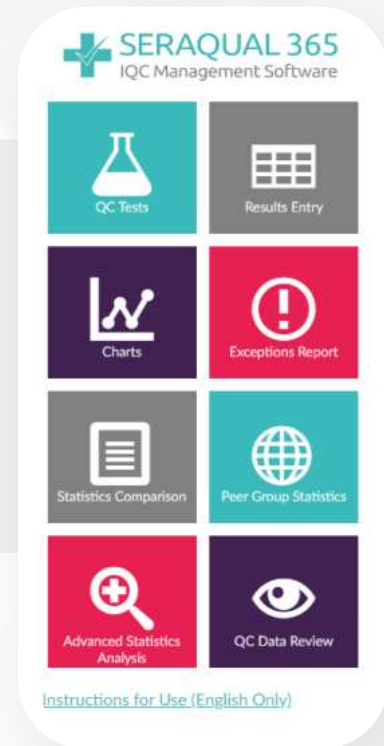
1

## Dashboard

Presents condensed options 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

Instrument ID	Cobas				
Location	Chemistry Lab				
Instrument Name	Roche Cobas c311				
Control Type	Clinical Chemistry				
Lots	HSN029 - HSE029				
Show	<input checked="" type="radio"/> Current Assays <input type="radio"/> All Assays				
<a href="#">Add Assay</a>					
Analyte	Method	Reagent Supplier	Unit	Temperature (°C)	Current?
Acid Phosphatase Prostatis	Naphthyl with Pentandiol	Roche Diagnostics	U/L	37	<input checked="" type="checkbox"/>
Bileubin Direct	DCA	3P Bioscience S.R.L.	µmol/L	0	<input checked="" type="checkbox"/>
CK	CK-NAC	ABX Health	U/L	37	<input checked="" type="checkbox"/>

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.

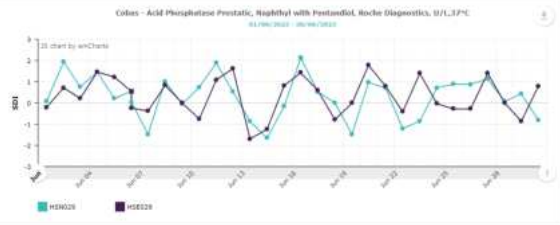
There are also indicators to show when a result has been edited, commented upon or reviewed.

Assay: Acid Phosphatase Prostatis, Naphthyl with Pentandiol, Roche Diagnostics, U/L, 37°C						<input checked="" type="checkbox"/> Current?																			
Target Mean/SD		<table border="1"> <tr> <td>Mean</td> <td>0.0000</td> <td>Mean</td> <td>0.0000</td> </tr> <tr> <td>SD</td> <td>0.000</td> <td>SD</td> <td>0.000</td> </tr> </table>				Mean	0.0000	Mean	0.0000	SD	0.000	SD	0.000												
Mean	0.0000	Mean	0.0000																						
SD	0.000	SD	0.000																						
Your Statistics		<table border="1"> <tr> <td>Results</td> <td>192</td> <td>Results</td> <td>192</td> </tr> <tr> <td>Mean</td> <td>14.9812</td> <td>Mean</td> <td>35.2177</td> </tr> <tr> <td>SD</td> <td>1.268</td> <td>SD</td> <td>2.643</td> </tr> <tr> <td>CV%</td> <td>8.46</td> <td>CV%</td> <td>7.51</td> </tr> <tr> <td>Bias%</td> <td>0.00</td> <td>Bias%</td> <td>0.00</td> </tr> </table>				Results	192	Results	192	Mean	14.9812	Mean	35.2177	SD	1.268	SD	2.643	CV%	8.46	CV%	7.51	Bias%	0.00	Bias%	0.00
Results	192	Results	192																						
Mean	14.9812	Mean	35.2177																						
SD	1.268	SD	2.643																						
CV%	8.46	CV%	7.51																						
Bias%	0.00	Bias%	0.00																						
<input type="checkbox"/> Rule violation <input type="checkbox"/> Edited result <input type="checkbox"/> Comment <input checked="" type="checkbox"/> Reviewed																									
<a href="#">Add Result</a>																									



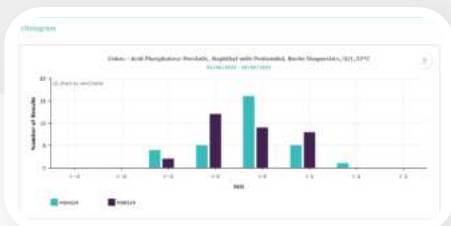
4

## Charts



The Levey Jennings and Histograms interactive charts that can be generated within a specific date range are 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	
06/05/2023	11:06:38	FD	15.4000	1.0 <b>ex</b>	36.4000	1.0 <b>ex</b>	0.5382

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

HSN029					HSE029		
DATE	TIME	OPERATOR	RESULT	SDI	RESULT	SDI	
07/05/2023	14:20:48	FD	8.2000	1.0 <b>ex</b>	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, Chemistry, Roche Diagnostics, hemol.

LOT	INSTRUMENT	NO. OF RESULTS	MEAN	SD	CV%	BIA%	SDI	CVI
NO. OF RESULTS	MEAN	SD	CV%	BIA%	SDI	CVI		
100-01-000	Roche Cobas c311 - Chemistry Lab 1	100	100	100	100	100	100	100
100-02-000	Roche Cobas c311 - Chemistry Lab 2	100	100	100	100	100	100	100
100-03-000	Roche Cobas c311 - Chemistry Lab 3	100	100	100	100	100	100	100

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

LOT	INSTRUMENT	NO. OF RESULTS	MEAN	SD	CV%	BIA%	SDI	CVI
NO. OF RESULTS	MEAN	SD	CV%	BIA%	SDI	CVI		
100-01-000	Roche Cobas c311 - Chemistry Lab 1	100	100	100	100	100	100	100
100-02-000	Roche Cobas c311 - Chemistry Lab 2	100	100	100	100	100	100	100
100-03-000	Roche Cobas c311 - Chemistry Lab 3	100	100	100	100	100	100	100

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
ACT - GPT	U/L	82	27.2942	1.079	3.94	2
Albumin	g/L	87	17.0878	17.232	100.06	3
Alkaline Phosphatase	U/L	108	346.7468	26.408	18.01	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](mailto:admin@seraqual365.com)





# 24

**SECTION 24**  
**ANALYTE**  
**INDEX**



	ALDOLASE CALIBRATOR	ALDOLASE CONTROLS	AMMONIA CALIBRATOR	AMMONIA CONTROL	ASO SINGLE POINT CALIBRATOR	ASO, CRP RF CONTROLS	BILIRUBIN CALIBRATOR	BILIRUBIN CONTROL	BLOOD GAS & ELECTROLYTE CONTROLS	BOVINE ASSAYED CONTROLS	BOVINE PRECISION CONTROLS	CALIBRATION SERUM	CARDIAC CONTROLS	CK CK MB CALIBRATOR	CK CK MB CONTROLS	CO <sub>2</sub> CALIBRATOR & CONTROLS	CO <sub>2</sub> CONTROL	COAGULATION CALIBRATOR & CONTROLS	COAGULATION CONTROLS	CRP CALIBRATOR	CRP CONTROLS	CRP (ULTRA SENSITIVE STD SET)	CRP (ULTRA SENSITIVE) CONTROLS	CSF CONTROLS	CYAN METHAEMOGLOBIN STD SET	CYSTATIN C CALIBRATOR SET	CYSTATIN C CONTROL	DRUGS OF ABUSE CONTROLS	ELECTROLYTE CONTROLS
5-HIAA																													
17-OH-PROGESTERONE																													
A-1-ACID GLYCOPROTEIN																													
A-1 ANTI TRYPSIN																													
A-2 MACROGLOBULIN																													
A HBDH										✓	✓	✓																	
B-2 MICROGLOBULIN																													
A/G RATIO										✓	✓																		
ACETAMINOPHEN																													
ACID PHOSPHATASE										✓	✓	✓																	
APTT																		✓	✓										
ALBUMIN										✓	✓	✓												✓					
ALDOLASE	✓	✓								✓	✓	✓																	
ALP										✓	✓	✓																	
AFP																													
ALT/SGPT										✓	✓	✓																	
AMIKACIN																													
AMMONIA			✓	✓																									
AMYLASE										✓	✓	✓																	
AMYLASE PANCREATIC										✓	✓	✓																	
ANTI-HCV																													
ANTI-HIV																													
ASO					✓	✓																							
ANTITHROMBIN III																													
APO A1																													
APO B																													
AST/SGOT										✓	✓	✓																	
BARBITURATES																												✓	
BENZODIAZEPINES																												✓	
BILIRUBIN DIRECT							✓	✓		✓	✓	✓																	
BILIRUBIN TOTAL							✓	✓		✓	✓	✓																	
BLOOD																													
C1 ESTERASE INHIBITOR																													
CA 15-3																													
CA 19-9																													
CA 125																													
CALCIUM										✓	✓	✓																	
CANNABINOIDS																												✓	
CARBAMAZEPINE																													
CEA																													
CERULOPLASMIN																													
CHLORIDE									✓	✓	✓	✓												✓					



FRUCTOSAMINE CALIBRATOR	FRUCTOSAMINE CONTROLS	HAEMATOLOGY CALIBRATOR	HAEMATOLOGY CONTROLS	HBATC CALIBRATOR	HBATC CONTROLS	HBSC CONTROL PANEL	HCG CONTROLS	HOMOCYSTEINE CALIBRATOR	HOMOCYSTEINE CONTROLS	HUMAN ASSAYED CONTROLS	HUMAN PRECISION CONTROLS	IMMUNOASSAY CONTROLS	LIPID CALIBRATOR	LIPID CONTROLS	LIPOPROTEIN (A) CALIBRATOR & CONTROL	MICROALBUMIN CALIBRATOR	MICROALBUMIN CONTROLS	PROTEIN CALIBRATORS	PROTEIN CONTROLS	RF MULTIPPOINT CALIBRATOR	RF CONTROLS	TDM CONTROLS	THALASSAEMIA CONTROLS	TUMOUR MARKER CONTROLS	URINE ASSAYED CONTROLS	URINE PRECISION CONTROLS	URINE STRIP CONTROLS	
																											5-HIAA	
																											17-OH-PROGESTERONE	
																											A-1 ACID GLYCOPROTEIN	
																											A-1 ANTI TRYPSIN	
																											A-2 MACROGLOBULIN	
																											A HBDH	
																											B-2 MICROGLOBULIN	
																											A/G RATIO	
																											ACETEMINOPHEN	
																											ACID PHOSPHATSE	
																											APTT	
																											ALBUMIN	
																											ALDOLASE	
																											ALP	
																											AFP	
																											ALT/SGPT	
																											AMIKACIN	
																											AMMONIA	
																											AMYLASE	
																											AMYLASE PANCREATIC	
																											ANTI-HCV	
																											ANTI-HIV	
																											ASO	
																											ANTITHROMBIN III	
																											APO A1	
																											APO B	
																											AST/SGOT	
																											BARBITURATES	
																											BENZODIAZEPINES	
																											BILIRUBIN DIRECT	
																											BILIRUBIN TOTAL	
																											BLOOD	
																											C1 ESTERASE INHIBITOR	
																											CA 15-3	
																											CA 19-9	
																											CA 125	
																											CALCIUM	
																											CANNIBINOIDS	
																											CARBAMAZEPINE	
																											CEA	
																											CERULOPLASMIN	
																											CHLORIDE	



	ALDOLASE CALIBRATOR	ALDOLASE CONTROLS	AMMONIA CALIBRATOR	AMMONIA CONTROL	ASO SINGLE POINT CALIBRATOR	ASO, CRP, RF CONTROLS	BILIRUBIN CALIBRATOR	BILIRUBIN CONTROL	BLOOD GAS & ELECTROLYTE CONTROLS	BOVINE ASSAYED CONTROLS	BOVINE PRECISION CONTROLS	CALIBRATION SERUM	CARDIAC CONTROLS	CK CK MB CALIBRATOR	CK CK MB CONTROLS	CO <sub>2</sub> CALIBRATOR & CONTROLS	CO <sub>2</sub> CONTROL	COAGULATION CALIBRATOR & CONTROLS	COAGULATION CONTROLS	CRP CALIBRATOR	CRP CONTROLS	CRP (ULTRA-SENSITIVE STD SET)	CRP (ULTRA-SENSITIVE) CONTROLS	CSF CONTROLS	CYANIDE THAEMOGLOBIN STD SET	CYSTATIN C CALIBRATOR SET	CYSTATIN C CONTROL	DRUGS OF ABUSE CONTROLS	ELECTROLYTE CONTROLS
CHOLESTEROL HDL										✓	✓	✓																	
CHOLESTEROL LDL										✓	✓	✓																	
CHOLESTEROL TOTAL										✓	✓	✓																	
CHOLINESTERASE										✓	✓	✓																	
CK TOTAL										✓	✓	✓	✓	✓	✓														
CK MB										✓	✓	✓	✓	✓	✓														
CO <sub>2</sub>																✓	✓												
COCAINE																												✓	
COMPLEMENT C 3																													
COMPLEMENT C 4																													
COPPER										✓	✓	✓																	
CORTISOL																													
C-PEPTIDE																													
CRP						✓														✓	✓	✓	✓						
CREATININE										✓	✓	✓																	
CYCLOSPORINE																													
CYSTATIN C																										✓	✓		
D - AMPHETAMINE																												✓	
D - METHAMPHETAMINE																												✓	
DHEAS																													
DIGITOXIN																													
DIGOXIN																													
ESTRADIOL																													
ESTRIOL UE 3																													
FERRITIN																													
FIBRINOGEN																		✓	✓										
FRUCTOSAMINE																													
FSH																													
GGT										✓	✓	✓																	
GLUCOSE										✓	✓	✓												✓					
GRANULOCYTES																													
HAPTOGLOBIN																													
HBSAG																													
HCG																													
HCG-B																													
HAEMATOCRIT (HCT)																													
HAEMOGLOBIN																									✓				
HAEMOGLOBIN A1C																													
HAEMOGLOBIN A2																													
HAEMOGLOBIN F																													
HAEMOGLOBIN S																													



FRUCTOSAMINE CALIBRATOR	FRUCTOSAMINE CONTROLS	HAEMATOLOGY CALIBRATOR	HAEMATOLOGY CONTROLS	HBATC CALIBRATOR	HBATC CONTROLS	HBSAG CONTROL PANEL	HCG CONTROLS	HOMOCYSTEINE CALIBRATOR	HOMOCYSTEINE CONTROLS	HUMAN ASSAYED CONTROLS	HUMAN PRECISION CONTROLS	IMMUNOASSAY CONTROLS	LIPID CALIBRATOR	LIPID CONTROLS	LIPOPROTEIN (A) CALIBRATOR & CONTROL	MICROALBUMIN CALIBRATOR	MICROALBUMIN CONTROLS	PROTEIN CALIBRATORS	PROTEIN CONTROLS	RF MULTIPPOINT CALIBRATOR	RF CONTROLS	TDM CONTROLS	THALASSAEMIA CONTROLS	TUMOUR MARKER CONTROLS	URINE ASSAYED CONTROLS	URINE PRECISION CONTROLS	URINE STRIP CONTROLS	
										✓	✓		✓	✓														CHOLESTEROL HDL
										✓	✓		✓	✓														CHOLESTEROL LDL
										✓	✓		✓	✓														CHOLESTEROL TOTAL
										✓	✓																	CHOLINESTERASE
										✓	✓																	CK TOTAL
										✓	✓																	CK MB
																												CO <sub>2</sub>
																												COCAINE
																		✓	✓									COMPLEMENT C3
																		✓	✓									COMPLEMENT C4
										✓	✓																	COPPER
												✓																CORTISOL
												✓						✓										C- PEPTIDE
																			✓									CRP
										✓	✓															✓		CREATININE
																						✓						CYCLOSPORINE
																												CYSTATIN C
																												D- AMPHETAMINE
																												D-METHAMPHETAMINE
												✓																DHEAS
																						✓						DIGITOXIN
																						✓						DIGOXIN
												✓																ESTRADIOL
												✓																ESTRIOL UE 3
												✓						✓	✓									FERRITIN
																												FIBRINOGEN
✓	✓																											FRUCTOSAMINE
												✓																FSH
										✓	✓																	GGT
										✓	✓																	GLUCOSE
		✓	✓																									GRANULOCYTES
																		✓	✓									HAPTOGLOBIN
						✓																						HBSAG
							✓					✓																HCG
												✓																HCG - B
		✓	✓																									HAEMATOCRIT (HCT)
		✓	✓																									HAEMOGLOBIN
				✓	✓																							HAEMOGLOBIN A1C
																							✓					HAEMOGLOBIN A 2
																								✓				HAEMOGLOBIN F
																								✓				HAEMOGLOBIN S





[illegible]

FRUCTOSAMINE CALIBRATOR	FRUCTOSAMINE CONTROLS	HAEMATOLOGY CALIBRATOR	HAEMATOLOGY CONTROLS	HBATC CALIBRATOR	HBATC CONTROLS	HB5AG CONTROL PANEL	HCG CONTROLS	HOMOCYSTEINE CALIBRATOR	HOMOCYSTEINE CONTROLS	HUMAN ASSAYED CONTROLS	HUMAN PRECISION CONTROLS	IMMUNOASSAY CONTROLS	LIPID CALIBRATOR	LIPID CONTROLS	LIPOPROTEIN (A) CALIBRATOR & CONTROL	MICROALBUMIN CALIBRATOR	MICROALBUMIN CONTROLS	PROTEIN CALIBRATORS	PROTEIN CONTROLS	RF MULTIPPOINT CALIBRATOR	RF CONTROLS	TDM CONTROLS	THALASSAEMIA CONTROLS	TUMOUR MARKER CONTROLS	URINE ASSAYED CONTROLS	URINE PRECISION CONTROLS	URINE STRIP CONTROLS	
												✓																HGH
								✓	✓																			HOMOCYSTEINE
																												HS- CRP
																		✓	✓									IGA
																		✓	✓									IGG
												✓						✓	✓									IGE
																		✓	✓									IGM
												✓																INSULIN
										✓	✓																	IRON
										✓	✓																	IRON TIBC
										✓	✓																	IRON UIBC
										✓	✓							✓	✓									KAPPA LIGHT CHAINS
										✓	✓															✓		KETONES
										✓	✓																	LACTATE
																		✓	✓									LAMBDA LIGHT CHAINS
										✓	✓																	LDH
										✓	✓																	LIPASE
										✓	✓				✓													LIPOPROTEIN (A)
										✓	✓																	LITHIUM
																												LSD
		✓	✓							✓	✓																	LYMPHOCYTES
																												MAGNESIUM
																												MDMA
		✓	✓																									MCH
		✓	✓																									MCV
		✓	✓																									MPV
																									✓	✓		METANEPHRINES
																												METHADONE
																												METHAMPHETAMINE
																							✓					METHOTREXATE
																✓	✓											MICROALBUMIN
																										✓		NITRITE
																									✓	✓		NOREPINEPHRINE
																									✓	✓		NORMETAHEPHRINE
																												OPIATES
																									✓	✓		OSMOLALITY
																												PCO <sub>2</sub>
																												PO <sub>2</sub>
																												PH



Blood Gas



Clinical Chemistry



Diabetes



Haematology



Immunology



Thalassaemia



Urine



Cardiac



Coagulation



Drugs Of Abuse



Immunoassay



Lipids



Therapeutic

	ALDOLASE CALIBRATOR	ALDOLASE CONTROLS	AMMONIA CALIBRATOR	AMMONIA CONTROL	ASO SINGLE POINT CALIBRATOR	ASO CRP RF CONTROLS	BILIRUBIN CALIBRATOR	BILIRUBIN CONTROL	BLOOD GAS & ELECTROLYTE CONTROLS	BOVINE ASSAYED CONTROLS	BOVINE PRECISION CONTROLS	CALIBRATION SERUM	CARDIAC CONTROLS	CK CK MB CALIBRATOR	CK CK MB CONTROLS	CO <sub>2</sub> CALIBRATOR & CONTROLS	CO <sub>2</sub> CONTROL	COAGULATION CALIBRATOR & CONTROLS	COAGULATION CONTROLS	CRP CALIBRATOR	CRP CONTROLS	CRP (ULTRA SENSITIVE STD SET)	CRP (ULTRA SENSITIVE) CONTROLS	CSF CONTROLS	CYANMETHAEMOGLOBIN STD SET	CYSTATIN C CALIBRATOR SET	CYSTATIN C CONTROL	DRUGS OF ABUSE CONTROLS	ELECTROLYTE CONTROLS
PDW																													
PHENOBARBITAL																													✓
PHENCYCLIDINE																													✓
PHENYTOIN																													
PHOSPHOROUS										✓	✓	✓																	
PLATELETS (PLT)																													
PLATELECIT(PCT)																													
POTASSIUM									✓	✓	✓	✓																	✓
PREALBUMIN																													
PROLACTIN																													
PROTEIN (TOTAL)										✓	✓	✓																	
PROTHROMBIN TIME( PT)																		✓	✓										
PSA																													
PSA FREE																													
RED BLOOD CELLS (RBC)																													
RDW																													
RHEUMATOID FACTOR																													
SODIUM									✓	✓	✓	✓													✓				✓
SPECIFIC GRAVITY																													
T3 TOTAL																													
T3 FREE																													
T-UPTAKE																													
T4 TOTAL																													
T4 FREE																													
TESTOSTERONE																													
THC																													✓
THEOPHYLLINE																													
THROMBIN TIME (TT)																		✓	✓										
TOBRAMYCIN																													
TRANSFERRIN																													
TRICYCLICS																													✓
TRIGLYCERIDES										✓	✓	✓																	
TROPONIN I													✓																
TROPONIN T													✓																
TSH																													
UREA										✓	✓	✓																	
URIC ACID										✓	✓	✓																	
URBILINOGEN																													
VALPROIC ACID																													
VANCOMYCIN																													
VMA																													
WBC																													
ZINC										✓	✓	✓																	





# 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 for 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 damage or shortages are immediately apparent on 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.

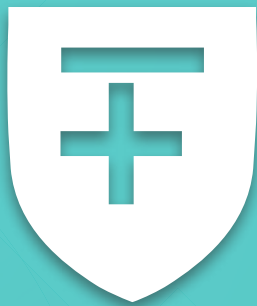
Control of Substances Hazardous to Health 2002 (COSHH)

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

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



**Fortress  
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