



B. 4. 3. Accessories

Article No.	Description
Accessories	
75003017	TX-1000 rotor cross
75003001	TX-1000 buckets (4x)
75007309	TX-1000 ClickSeal biocontainment lids (4x)
75007001	Replacement O-rings
75007300	1000 ml Bio-bottle - polypropylene (4x)
Adapters used for Laboratory Use	
75007301	1000 ml Bio-bottle (75007300)
75007304	750 ml polypropylene Bio-bottle
75004253	500 ml Nalgene bottle
75007302	500 ml Corning bottle (requires Corning 431124)
75005392	250 ml Corning Conical bottle or 200 ml Nunc™ bottle or 175 ml Nalgene conical bottle
75007305	250 ml Nalgene bottle / 225 ml BD Falcon™ (requires BD #352090) / 200 ml Nunc conical bottle (requires Nunc #377585) / 175 ml Nalgene conical bottle (requires Nalgene #DS3126-0175)
75004252	50 ml Nalgene Oak Ridge tube
75003829	Small bag/cell culture bags 4 x 2 bags (< 350 ml)
Adapters used for IVD	
75003674	50 ml conical tube
75004255	50 ml double biocontainment vessel for 50 ml conical tube (can be combined with ClickSeal lids)
75007306	15 ml conical tube
75003672	10 ml blood collection tube (16 x 100 mm) or Corex™/Kimble™ tubes
75003697	9/10 ml blood collection tube (Sarstedt™)
75003671	5/7 ml blood collection tube (13 x 75-100 mm)
75003709	4.5/6 ml blood collection tube (Greiner™)
75007303	Microplate carriers

B. 4. 4. Biocontainment Certificate

Health Protection Agency
Microbiology Services
Porton Down
Salisbury
Wiltshire
SP4 0JG



Certificate of Containment Testing

Containment Testing of Thermo Scientific TX-1000 Rotor in a Thermo Scientific Centrifuge

Report No. 170-12 G1

Report Prepared For: Thermo Fisher Scientific
Issue Date: 10th October 2012 re-issued 21st August 2013

Test Summary

Thermo Scientific TX-1000 Rotor is identical to the rotor tested according to report 170-12 G. We consider that this rotor will match the performance of that previously containment tested in a Thermo Scientific centrifuge at 5,500 rpm, using Annex AA of IEC 61010-2-020:2006 (2nd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Anna Moy
Name: Ms Anna Moy
Title: Biosafety Scientist

Report Authorised By

S. Parks
Name: Mr Simon Parks
Title: Senior Biosafety Scientist

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B. 5. H-FLEX 1

B. 5. 1. Items Supplied

Article No.	Item	Quantity
75003300	H-FLEX 1 rotor	1
50157859	Rotor safety information	1
75003786	Bolt grease	1
50158588	GP rotors information card	1

B. 5. 2. Technical Data

General Technical Data	
Weight (empty)	6.0 kg
Maximum Permissible Load	2 x 1115 g
Max. Cycle Number	55000
Radius max. / min.	174 mm / 32 mm
Angle	90°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C
Not Autoclavable Parts	O-ring 20058488

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	4 700 rpm
Maximum RCF-Value at n_{max}	4 297 x g
K-Factor at n_{max}	19 394
Acceleration / Braking Time	35 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	9 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	4 700 rpm	4 700 rpm
Maximum RCF-Value at n_{max}	4 297 x g	4 297 x g
K-Factor at n_{max}	19 394	19 394
Acceleration / Braking Time	40 s / 40 s	40 s / 40 s
Maximum Speed at 4 °C	4 700 rpm	4 700 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	2 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	4 700 rpm
Maximum RCF-Value at n_{max}	4 297 x g
K-Factor at n_{max}	19 394
Acceleration / Braking Time	35 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	9 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	4 700 rpm	4 700 rpm
Maximum RCF-Value at n_{max}	4 297 x g	4 297 x g
K-Factor at n_{max}	19 394	19 394
Acceleration / Braking Time	40 s / 40 s	40 s / 40 s
Maximum Speed at 4 °C	4 700 rpm	4 700 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	2 °C



B. 5. 3. Accessories

Article No.	Description
Accessories	
75003301	H-Flex 1 Rotor bucket, set of 2
75003302	Bucket cap H-Flex 1, set of 2
Adapters used for Laboratory Use	
75003308	Adapter for TX-400 (see on page B-5)
Adapters used for IVD	
75003303	50 ml conical tube
75003304	15 ml conical tube
75003305	10/12 ml blood collection tube
75003306	5/7 ml blood collection tube
75003307	Microplate carriers

B. 5. 4. Biocontainment Certificate



Public Health England
National Infection Service
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

**Containment Testing of Thermo Scientific
Swinging Buckets (75003301) and
Sealing Caps (75003302)
in a H-Flex 1 (75003300) rotor
in a Thermo Scientific Centrifuge**

Report No. 18-015

Report Prepared For: Thermo Fisher Scientific
Issue Date: 04 September 2018

Test Summary

Thermo Scientific Swinging Buckets (75003301) and Sealing Caps (75003302) in a H-Flex 1 rotor (75003300) were containment tested in a Thermo Scientific centrifuge at 4,700 rpm, using Annex AA of IEC 61010-2-020:2016 (3rd Ed.). The sealed buckets were shown to contain all contents.

Report Written By

Anna Moy

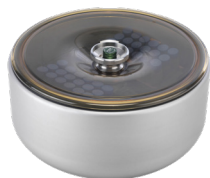
Name: Ms Anna Moy
Title: Biosafety Scientist

Report Authorised By

Sara Speight

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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B. 6. H-FLEX HS4

B. 6. 1. Items Supplied

Article No.	Item	Quantity
75003330	H-FLEX HS4 rotor	1
76003500	Rubber seal grease	1
75003786	Bolt grease	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1

Performance data of the compatible ventilated
4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6 100 rpm	6 100 rpm
Maximum RCF-Value at n_{\max}	7 196 x g	7 196 x g
K-Factor at n_{\max}	11 474	11 474
Acceleration / Braking Time	65 s / 85 s	70 s / 85 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6 100 rpm	6 100 rpm
Maximum RCF-Value at n_{\max}	7 196 x g	7 196 x g
K-Factor at n_{\max}	11 474	11 474
Acceleration / Braking Time	65 s / 85 s	70 s / 85 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

B. 6. 2. Technical Data

General Technical Data	
Weight (empty)	5.4 kg
Maximum Permissible Load	2 x 1115 g
Max. Cycle Number	22000
Radius max. / min.	173 mm / 32 mm
Angle	90°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C
Not Autoclavable Parts	Gasket 20290682

Performance data of the compatible refrigerated
4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6 100 rpm	6 100 rpm
Maximum RCF-Value at n_{\max}	7 196 x g	7 196 x g
K-Factor at n_{\max}	11 474	11 474
Acceleration / Braking Time	60 s / 70 s	60 s / 70 s
Maximum Speed at 4 °C	6 100 rpm	5 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-1 °C	10 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6 100 rpm	6 100 rpm
Maximum RCF-Value at n_{\max}	7 196 x g	7 196 x g
K-Factor at n_{\max}	11 474	11 474
Acceleration / Braking Time	60 s / 70 s	60 s / 70 s
Maximum Speed at 4 °C	6 100 rpm	5 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-1 °C	10 °C



B. 6. 3. Accessories

Article No.	Description
Accessories	
75003338	Bucket H-Flex HS4 (2x)
75003339	Windshield Lid H-Flex HS4
Adapters used for Laboratory Use	
75003308	Adapter TX-400
Adapters used for IVD	
75003303	50 ml conical tube
75003304	15 ml conical tube
75003305	10/12 ml blood collection tube
75003306	5/7 ml blood collection tube
75003307	Microplate carriers

B. 6. 4. Biocontainment Certificate



Public Health England
National Infection Service
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

**Containment Testing of
Thermo Scientific
H-Flex HS4 rotor (75003330) in
a Thermo Scientific Centrifuge**

Report No. 19-085

Report Prepared For: Thermo Fisher Scientific
Issue Date: 22 July 2020

Test Summary

Thermo Scientific H-Flex HS4 rotor (75003330) was containment tested in a Thermo Scientific centrifuge at 6,100 rpm, using Annex AA of IEC 61010-2-020:2016 (3rd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Name: Ms Helen Hookway
Title: Biosafety Scientist

Report Authorised By

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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B. 7. HIGHPlate 6000

B. 7. 1. Items Supplied

Article No.	Item	Quantity
75003606	HIGHPlate 6000	1
76003500	Rubber seal grease	1
75003786	Bolt grease	1
50158588	GP rotors information card	1
50117083	Carrier	2
20056846	Rubber plates	2
50157859	Rotor safety information	1

B. 7. 2. Technical Data

General Technical Data	
Weight (empty)	8.0 kg
Maximum Permissible Load	2 x 500 g
Max. Cycle Number	60 000
Radius max. / min.	139 mm / 58 mm
Angle	90°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C
Not Autoclavable Parts	Gasket 50117078

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6300 rpm	6300 rpm
Maximum RCF-Value at n_{\max}	6168 x g	6168 x g
K-Factor at n_{\max}	5571	5571
Acceleration / Braking Time	45 s / 65 s	55 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	16 °C	16 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	6300 rpm	6300 rpm
Maximum RCF-Value at n_{\max}	6168 x g	6168 x g
K-Factor at n_{\max}	5571	5571
Acceleration / Braking Time	50 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	6300 rpm	6 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-2 °C	7 °C



B. 7. 3. Accessories

Article No.	Description
Accessories	
75003622	Sealing kit

B. 7. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of Thermo Scientific rotor 75003606

Report No. 59-08 H

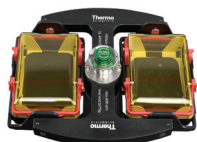
Report prepared for: Thermo Fisher
Issue Date: 15th January 2009

Test Summary

A Thermo Scientific 75003606 contained rotor (Max speed 6,300 rpm) was supplied by Thermo Fisher and containment tested at 6,300 rpm using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 8. M-20 Microplate

B. 8. 1. Items Supplied

Article No.	Item	Quantity
75003624	M-20 Microplate	1
76003500	Rubber seal grease	1
75003786	Bolt grease	1
50158588	GP rotors information card	1

B. 8. 2. Technical Data

General Technical Data	
Weight (empty)	4.23 kg
Maximum Permissible Load	2 x 770 g
Max. Cycle Number	50 000
Radius max. / min.	127 mm / 79 mm
Angle	90°
Aerosol-tight	Optional
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

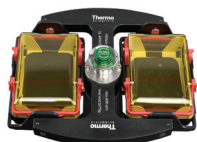
Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	4 000 rpm
Maximum RCF-Value at n_{max}	2 272 x g
K-Factor at n_{max}	7 507
Acceleration / Braking Time	20 s / 30 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	7 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{max}	2 272 x g	2 272 x g
K-Factor at n_{max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Maximum Speed at 4 °C	4 000 rpm	4 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-7 °C	-6 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	4 000 rpm
Maximum RCF-Value at n_{max}	2 272 x g
K-Factor at n_{max}	7 507
Acceleration / Braking Time	20 s / 30 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	7 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{max}	2 272 x g	2 272 x g
K-Factor at n_{max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Maximum Speed at 4 °C	4 000 rpm	4 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-7 °C	-6 °C



B. 8. 3. Technical Data

General Technical Data	
Weight (empty)	4.23 kg
Maximum Permissible Load	2 x 770 g
Max. Cycle Number	50 000
Radius max. / min.	127 mm / 79 mm
Angle	90°
Aerosol-tight	Optional
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

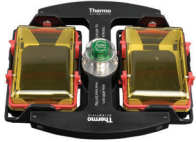
Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{\max}	2272 x g	2272 x g
K-Factor at n_{\max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	9 °C	9 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{\max}	2272 x g	2272 x g
K-Factor at n_{\max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Maximum Speed at 4 °C	4 000 rpm	4 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-7 °C	-6 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{\max}	2272 x g	2272 x g
K-Factor at n_{\max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	9 °C	9 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	4 000 rpm	4 000 rpm
Maximum RCF-Value at n_{\max}	2272 x g	2272 x g
K-Factor at n_{\max}	7 507	7 507
Acceleration / Braking Time	20 s / 30 s	20 s / 30 s
Maximum Speed at 4 °C	4 000 rpm	4 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-7 °C	-6 °C



B. 8. 4. Accessories

Article No.	Description
Accessories	
75002011	Replacement sealing lids (2x)
75002012	Replacement O-rings (4x)
Adapters used for IVD	
Included	Microplate carriers
76003625	Aerosol-tight capsule
75003624	M-20 rotor cross

B. 8. 5. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment testing of Thermo Scientific swing out bucket rotor 75003624 and buckets 75003625

Report No. 77- 08 C

Report prepared for: Thermo Fisher
Issue Date: 1st June 2009

Test Summary

A Thermo Scientific centrifuge bucket 75003625 with aerosol tight lid (Max speed 4,000 rpm) was supplied by Thermo Fisher and containment tested at 4,000 rpm using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 9. BIOShield 720

B. 9. 2. Technical Data

B. 9. 1. Items Supplied

Article No.	Item	Quantity
75003183	BIOShield 720 rotor	1
76003500	Rubber seal grease	1
75003786	Bolt grease	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1

General Technical Data	
Weight (empty)	5.7 kg
Maximum Permissible Load	4 x 470 g
Max. Cycle Number	66 000
Radius max. / min.	162 mm / 67 mm
Angle	90°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C
Not Autoclavable Parts	Gasket 50117078

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	6300 rpm
Maximum RCF-Value at n_{max}	7 188 x g
K-Factor at n_{max}	5 628
Acceleration / Braking Time	50 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	19 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	6300 rpm	6300 rpm
Maximum RCF-Value at n_{max}	7 188 x g	7 188 x g
K-Factor at n_{max}	5 628	5 628
Acceleration / Braking Time	55 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	6300 rpm	6300 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	1 °C	6 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	5300 rpm
Maximum RCF-Value at n_{max}	5 088 x g
K-Factor at n_{max}	7 952
Acceleration / Braking Time	50 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	14 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	5300 rpm	5300 rpm
Maximum RCF-Value at n_{max}	5 088 x g	5 088 x g
K-Factor at n_{max}	7 952	7 952
Acceleration / Braking Time	55 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	5300 rpm	5300 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-4 °C	2 °C



B. 9. 3. Accessories

Article No.	Description
Accessories	
75003693	180 ml Bio-Bottle - Polypropylene (12x)
75003622	Sealing kit
Adapters used for Laboratory Use	
75003813	150 ml round bottom open-top tube
75003814	100 ml round bottom open-top tube
75003816	50 ml DIN round bottom tube
75003817	25 ml DIN round bottom tube
75003820	15 ml Sarstedt tube
75003822	5/7 ml round bottom open-top tube
Adapters used for IVD	
75003677	50 ml conical tube
75003818	30 ml Sterilin universal tube
75003678	15 ml conical tube
75003701	10 ml blood collection tube (16 x 100 mm)
75003821	5/7 ml blood collection tube (13 x 75-100 mm)
75003823	1.5/2 ml conical microtube

B. 9. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of contained Bioshield 720 Thermo Scientific rotor 75003621

Report No. 77- 08 F

Report prepared for: Thermo Fisher
Issue Date: 1st June 2009

Test Summary

A Thermo Scientific 75003621 contained Bioshield 720 rotor (Max speed 6,300 rpm) was supplied by Thermo Fisher and containment tested at 6,300 rpm using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 10. BIOShield 1000A

B. 10. 1. Items Supplied

Article No.	Item	Quantity
75003182	BIOShield 1000A	1
75003786	Bolt grease	1
76003500	Rubber seal grease	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1

B. 10. 2. Technical Data

General Technical Data	
Weight (empty)	8,5 kg
Maximum Permissible Load	4 x 600 g
Max. Cycle Number	30 000
Radius max. / min.	178 mm / 82 mm
Angle	90°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C
Not Autoclavable Parts	Gasket 20290682

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	6000 rpm	6000 rpm
Maximum RCF-Value at n_{max}	7 164 x g	7 164 x g
K-Factor at n_{max}	5 447	5 447
Acceleration / Braking Time	65 s / 85 s	75 s / 85 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	14 °C	14 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	6000 rpm	6000 rpm
Maximum RCF-Value at n_{max}	7 164 x g	7 164 x g
K-Factor at n_{max}	5 447	5 447
Acceleration / Braking Time	70 s / 85 s	70 s / 85 s
Maximum Speed at 4 °C	6000 rpm	5 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	1 °C	12 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	5300 rpm	5300 rpm
Maximum RCF-Value at n_{max}	5 590 x g	5 590 x g
K-Factor at n_{max}	6 981	6 981
Acceleration / Braking Time	65 s / 80 s	70 s / 80 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	10 °C	10 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	5300 rpm	5300 rpm
Maximum RCF-Value at n_{max}	5 590 x g	5 590 x g
K-Factor at n_{max}	6 981	6 981
Acceleration / Braking Time	65 s / 85 s	70 s / 80 s
Maximum Speed at 4 °C	5300 rpm	5300 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-1 °C	3 °C



B. 10. 3. Accessories

Article No.	Description
Adapters used for Laboratory Use	
75003737	250 ml flat bottom bottle
75003738	150 ml round bottom open-top tube
75003742	100 ml round bottom open-top tube
75003749	50 ml round bottom tube
75003750	45 ml flat/round tube
75003756	25 ml DIN round bottom tube
75003758	14 ml flanged round bottom tube
75003769	5/7 ml round bottom tube (13 x 75-100 mm)
Adapters used for IVD	
75003755	30 ml Sterilin Universal tube
75003759	14 ml round or conical urine tube
75003767	10 ml blood collection (16 x 100 mm) or 15 ml DIN tube
75003768	5/7 ml or 4.5/6 ml blood collection tube
75003643	50 ml conical tube
75003642	15 ml conical tube
75003770	1.5/2 ml Microtube

B. 10. 4. Biocontainment Certificate



Public Health
England

Public Health England
National Infection Service
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

**Containment Testing of
Thermo Scientific BIOShield™
1000A (75003182) Rotor in a
Thermo Scientific Centrifuge**

Report No. 18-051

Report Prepared For: Thermo Fisher Scientific
Issue Date: 04 April 2019

Test Summary

Thermo Scientific BIOShield™ 1000A (75003182) rotor was containment tested in a Thermo Scientific centrifuge at 6,000 rpm, using Annex AA of IEC 61010-2-020:2016 (3rd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Anna Moy

Name: Ms Anna Moy
Title: Biosafety Scientist

Report Authorised By

Sara Speight

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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B. 11. CLINIConic

B. 11. 1. Items Supplied

Article No.	Item	Quantity
75003623	CLINIConic rotor	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1
50143707	Small benchtop rotors CD	1

B. 11. 2. Technical Data

General Technical Data	
Weight (empty)	4.7 kg
Maximum Permissible Load	30 x 30 g
Max. Cycle Number	50 000
Radius max. / min.	140 mm / 85 mm
Angle	37°
Aerosol-tight	No
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	5 650 rpm
Maximum RCF-Value at n_{max}	4 997 x g
K-Factor at n_{max}	3 955
Acceleration / Braking Time	20 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	13 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	5 650 rpm	5 650 rpm
Maximum RCF-Value at n_{max}	4 997 x g	4 997 x g
K-Factor at n_{max}	3 955	3 955
Acceleration / Braking Time	20 s / 35 s	20 s / 35 s
Maximum Speed at 4 °C	5 650 rpm	5 650 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	2 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	5 650 rpm
Maximum RCF-Value at n_{max}	4 997 x g
K-Factor at n_{max}	3 955
Acceleration / Braking Time	20 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	13 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	5 650 rpm	5 650 rpm
Maximum RCF-Value at n_{max}	4 997 x g	4 997 x g
K-Factor at n_{max}	3 955	3 955
Acceleration / Braking Time	20 s / 35 s	20 s / 35 s
Maximum Speed at 4 °C	5 650 rpm	5 650 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	2 °C



B. 11. 3. Accessories

Article No.	Description
Adapters used for Laboratory Use	
75003702	10 ml round bottom tube
Adapters used for IVD	
11172596	7 ml blood collection tubes (13 x 100 mm)
11172595	5 ml blood collection tubes (13 x 75 mm)



B. 12. 8 x 50 mL Sealed

B. 12. 1. Items Supplied

Article No.	Item	Quantity
75003694	8 x 50 Individually sealed fixed angle rotor	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1

B. 12. 2. Technical Data

General Technical Data	
Weight (empty)	3.3 kg
Maximum Permissible Load	8 x 189 g
Max. Cycle Number	50 000
Radius max. / min.	143 mm / 69 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	6 700 rpm
Maximum RCF-Value at n_{max}	7 177 x g
K-Factor at n_{max}	4 107
Acceleration / Braking Time	30 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	15 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	6 700 rpm	6 700 rpm
Maximum RCF-Value at n_{max}	7 177 x g	7 177 x g
K-Factor at n_{max}	4 107	4 107
Acceleration / Braking Time	25 s / 35 s	25 s / 35 s
Maximum Speed at 4 °C	6 700 rpm	6 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	1 °C	8 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	6 700 rpm
Maximum RCF-Value at n_{max}	7 177 x g
K-Factor at n_{max}	4 107
Acceleration / Braking Time	25 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	15 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	6 700 rpm	6 700 rpm
Maximum RCF-Value at n_{max}	7 177 x g	7 177 x g
K-Factor at n_{max}	4 107	4 107
Acceleration / Braking Time	25 s / 35 s	25 s / 35 s
Maximum Speed at 4 °C	6 700 rpm	6 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	1 °C	8 °C



B. 12. 3. Accessories

Article No.	Description
Adapters used for IVD	
75005755	15 ml conical tube
75005747	10 ml blood collection tube (16 x 100 mm)
75005748	7 ml blood collection tube (13 x 100 mm)
75005749	3.5 ml blood collection tube

B. 12. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment testing of Thermo Scientific Vessel 75003787

Report No. 77- 08 B

Report prepared for: Thermo Fisher
Issue Date: 1st June 2009

Test Summary

A Thermo Scientific vessel 75003787 with aerosol tight lid (Max rcf 7177 x g) was supplied by Thermo Fisher and containment tested at max rcf 7177 x g using the method described in Annex AA of EN 61010-2-020. The vessel was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 13. HIGHConic II

B. 13. 1. Items Supplied

Article No.	Item	Quantity
75003620	HIGHConic II	1
75003103	HIGHConic II adapter 1x50 ml	6
50158588	GP rotors information card	1
50157859	Rotor safety information	1

B. 13. 2. Technical Data

General Technical Data	
Weight (empty)	3.6 kg
Maximum Permissible Load	6 x 140 g
Max. Cycle Number	50 000
Radius max. / min.	126 mm / 61 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g
K-Factor at n_{\max}	1 713
Acceleration / Braking Time	40 s / 55 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	19 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1 713	1 713
Acceleration / Braking Time	40 s / 60 s	40 s / 60 s
Maximum Speed at 4 °C	10350 rpm	10350 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-1 °C	4 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g
K-Factor at n_{\max}	1 713
Acceleration / Braking Time	40 s / 55 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	19 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1 713	1 713
Acceleration / Braking Time	40 s / 60 s	40 s / 60 s
Maximum Speed at 4 °C	10350 rpm	10350 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-1 °C	4 °C



B. 13. 3. Technical Data

General Technical Data	
Weight (empty)	3.6 kg
Maximum Permissible Load	6 x 140 g
Max. Cycle Number	50 000
Radius max. / min.	126 mm / 61 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1713	1713
Acceleration / Braking Time	40 s / 55 s	40 s / 60 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	15 °C	15 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1713	1713
Acceleration / Braking Time	40 s / 60 s	40 s / 60 s
Maximum Speed at 4 °C	10350 rpm	10350 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-3 °C	0 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1713	1713
Acceleration / Braking Time	40 s / 55 s	40 s / 60 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	15 °C	15 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10350 rpm	10350 rpm
Maximum RCF-Value at n_{\max}	15090 x g	15090 x g
K-Factor at n_{\max}	1713	1713
Acceleration / Braking Time	40 s / 60 s	40 s / 60 s
Maximum Speed at 4 °C	8500 rpm	8500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	-3 °C	0 °C



B. 13. 4. Accessories

Article No.	Description
Accessories	
75003058	Replacement O-ring Kit
Adapters used for Laboratory Use	
75003102	50 ml Nalgene Oak Ridge tube
75003094	30 ml Nalgene Oak Ridge tube / 38 ml round tube
76002906	16 ml Nalgene Oak Ridge tube
75003093	10 ml Nalgene Oak Ridge tube / 12 ml round tube
75003092	6.5 ml round bottom tube
Adapters used for IVD	
75003103	50 ml conical tube
75003095	15 ml conical tube
75003091	1.5/2 ml Microtube

B. 13. 5. Biocontainment Certificate



Public Health England
Microbiology Services
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

Containment Testing of Thermo Scientific Rotor 75003620 HIGHConic II – 6x100ml in a Thermo Scientific Centrifuge

Report No. 36/13

Report Prepared For: Thermo Fisher Scientific

Issue Date: 4th November 2013

Test Summary

A Thermo Scientific 75003620 HIGHConic II – 6x100ml rotor was containment tested in a Thermo Scientific centrifuge at 12,000 rpm, using Annex AA of IEC 61010-2-020:2006 (2nd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Report Authorised By

Anna Moy

[Signature]

Name: Miss Anna Moy
Title: Biosafety Scientist

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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B. 14. Microliter 30 x 2

B. 14. 2. Technical Data

B. 14. 1. Items Supplied

Article No.	Item	Quantity
75003652	Microliter 30 x 2	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1
75003349	O-Ring kit	1

General Technical Data	
Weight (empty)	2.1 kg
Maximum Permissible Load	30 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	100 mm / 64 mm
Angle	45°
Aerosol-tight	Optional
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g
K-Factor at n_{\max}	489
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	23 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	5 °C	8 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g
K-Factor at n_{\max}	489
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	23 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	5 °C	8 °C



B. 14. 3. Technical Data

General Technical Data	
Weight (empty)	2.1 kg
Maximum Permissible Load	30 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	100 mm / 64 mm
Angle	45°
Aerosol-tight	Optional
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 800 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	2 °C	7 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 830 x g	25 830 x g
K-Factor at n_{\max}	489	489
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 800 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	2 °C	7 °C



B. 14. 4. Accessories

Article No.	Description
Accessories	
75003349	Replacement O-ring kit
Adapters used for IVD	
75005754	0.25 ml Microtube
75005753	0.5 ml Microtube
76003752	0.2 ml PCR tube

B. 14. 5. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of Thermo Scientific rotor 75003652

Report No. 77- 08 H

Report prepared for: Thermo Fisher
Issue Date: 1st June 2009

Test Summary

A Thermo Scientific contained rotor 75003652 (Max speed 15,200 rpm) was supplied by Thermo Fisher and containment tested at 15,200 rpm using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 15. Microliter 48 x 2

B. 15. 2. Technical Data

B. 15. 1. Items Supplied

Article No.	Item	Quantity
75003602	Microliter 48 x 2 rotor	1
76003500	Rubber seal grease	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1
75003349	O-Ring kit	1

General Technical Data	
Weight (empty)	2.5 kg
Maximum Permissible Load	48 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	98 mm / 59 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	15 200 rpm
Maximum RCF-Value at n_{max}	25 314 x g
K-Factor at n_{max}	556
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	22 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{max}	25 314 x g	25 314 x g
K-Factor at n_{max}	556	556
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	3 °C	8 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	15 200 rpm
Maximum RCF-Value at n_{max}	25 314 x g
K-Factor at n_{max}	556
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	22 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{max}	25 314 x g	25 314 x g
K-Factor at n_{max}	556	556
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	3 °C	8 °C



B. 15. 3. Technical Data

General Technical Data	
Weight (empty)	2.5 kg
Maximum Permissible Load	48 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	98 mm / 59 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 314 x g	25 314 x g
K-Factor at n_{\max}	556	556
Acceleration / Braking Time	35 s / 50 s	35 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 314 x g	25 314 x g
K-Factor at n_{\max}	556	556
Acceleration / Braking Time	35 s / 50 s	35 s / 50 s
Maximum Speed at 4 °C	15 200 rpm	15 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	0 °C	4 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 314 x g	25 314 x g
K-Factor at n_{\max}	556	556
Acceleration / Braking Time	35 s / 50 s	35 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C	21 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 314 x g	25 314 x g
K-Factor at n_{\max}	556	556
Acceleration / Braking Time	35 s / 50 s	35 s / 50 s
Maximum Speed at 4 °C	15 200 rpm	15 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	0 °C	4 °C



B. 15. 4. Accessories

Article No.	Description
Accessories	
75003349	Replacement O-ring kit
Adapters used for IVD	
75005754	0.25 ml Microtube
75005753	0.5 ml Microtube
76003752	0.2 ml PCR tube

B. 15. 5. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of Thermo Scientific Rotor 75003602

Report No. 59-08 E

Report prepared for: Thermo Fisher
Issue Date: 15th January 2009

Test Summary

A Thermo Scientific 75003602 contained rotor (Max speed 15,200 rpm) was supplied by Thermo Fisher and containment tested at 15,200 rpm using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill when tested in triplicate.

Report Written By

Report Authorised By



B. 16. MicroClick 30 x 2

B. 16. 2. Technical Data

B. 16. 1. Items Supplied

Article No.	Item	Quantity
75005719	MicroClick 30 x 2 rotor	1
70902041	ClickSeal lid	1
76003500	Rubber seal grease	1
75005726	O-ring set	1
50158588	GP rotors information card	1
50157859	Rotor safety information	1
50143707	Small benchtop rotors CD	1

General Technical Data	
Weight (empty)	1.44 kg
Maximum Permissible Load	30 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	99 mm / 64 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g
K-Factor at n_{\max}	563
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	19 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	0 °C	4 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g
K-Factor at n_{\max}	563
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	19 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	0 °C	4 °C



B. 16. 3. Technical Data

General Technical Data	
Weight (empty)	1.44 kg
Maximum Permissible Load	30 x 4 g
Max. Cycle Number	50 000
Radius max. / min.	99 mm / 64 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	138 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	30 s / 40 s	30 s / 40 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	18 °C	18 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	25 s / 40 s	25 s / 40 s
Maximum Speed at 4 °C	14 000 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	3 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	30 s / 40 s	30 s / 40 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	18 °C	18 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 694 x g	21 694 x g
K-Factor at n_{\max}	563	563
Acceleration / Braking Time	30 s / 40 s	30 s / 40 s
Maximum Speed at 4 °C	14 000 rpm	14 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-3 °C	3 °C



B. 16. 4. Accessories

Article No.	Description
Accessories	
75005726	Replacement O-ring Kit
Adapters used for IVD	
75005754	0.25 ml Microtube
75005753	0.5 ml Microtube
76003752	0.2 ml PCR tube

B. 16. 5. Biocontainment Certificate

Health Protection Agency
Microbiology Services
Porton Down
Salisbury
Wiltshire
SP4 0JG



Certificate of Containment Testing

**Containment Testing
of Rotor 75005719 MicroClick 30x2
in a
Thermo Scientific Centrifuge**

Report No. 194-12 B

Report Prepared For: Thermo Fisher Scientific

Issue Date: 30th October 2012

Test Summary

A 75005719 MicroClick 30x2 rotor was containment tested in a Thermo Scientific centrifuge at 15,000 rpm, using Annex AA of IEC 61010-2-20:2006 (2nd Ed.). The sealed rotor was shown to contain all contents.

Report Written By  Name: Ms Anna Moy Title: Biosafety Scientist	Report Authorised By  Name: Mrs Sara Speight Title: Senior Biosafety Scientist
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B. 17. MicroClick 18 x 5

B. 17. 1. Items Supplied

Article No.	Item	Quantity
75005765	MicroClick 18 x 5	1
20059119	ClickSeal lid	1
76003500	Rubber seal grease	1
50158588	GP rotors information card	1
75005726	O-ring set	1
50157859	Rotor safety information	1

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g
K-Factor at n_{\max}	378
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	22 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g
K-Factor at n_{\max}	378
Acceleration / Braking Time	45 s / 30 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	22 °C

B. 17. 2. Technical Data

General Technical Data	
Weight (empty)	1.7 kg
Maximum Permissible Load	18 x 9 g
Max. Cycle Number	50 000
Radius max. / min.	98 mm / 70 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	378	378
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 000 rpm	13 800 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	5 °C	10 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	378	378
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 000 rpm	13 800 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	5 °C	10 °C



B. 17. 3. Technical Data

General Technical Data	
Weight (empty)	1.7 kg
Maximum Permissible Load	18 x 9 g
Max. Cycle Number	50 000
Radius max. / min.	98 mm / 70 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 475 x g	21 475 x g
K-Factor at n_{\max}	434	434
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	17 °C	17 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	378	378
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 000 rpm	14 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	2 °C	8 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	14 000 rpm	14 000 rpm
Maximum RCF-Value at n_{\max}	21 475 x g	21 475 x g
K-Factor at n_{\max}	434	434
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	17 °C	17 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	378	378
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 000 rpm	14 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	2 °C	8 °C



B. 17. 4. Accessories

Article No.	Description
Accessories	
75005726	Replacement O-ring Kit
Adapters used for Laboratory Use	
75005756	1.2/2 ml Microtube
Adapters used for IVD	
75005756	1.5/2 ml Microtube

B. 17. 5. Biocontainment Certificate



Public Health England
Microbiology Services
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

Containment Testing of Thermo Scientific Rotor MicroClick 18x5 (75005765) in a Thermo Scientific Centrifuge

Report No. 102/13

Report Prepared For: Thermo Fisher Scientific
Issue Date: 13th February 2014

Test Summary

A Thermo Scientific MicroClick 18x5 rotor (75005765) was containment tested in a Thermo Scientific centrifuge at 15,000 rpm, using Annex AA of IEC 61010-2-020:2006 (2nd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Report Authorised By

Anna Moy

[Signature]

Name: Miss Anna Moy
Title: Biosafety Scientist

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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B. 18. Fiberlite F13-14 x 50cy

B. 18. 1. Items Supplied

Article No.	Item	Quantity
75003661*	Fiberlite F13-14 x 50cy	1
50158588	GP rotors information card	1

* Identical with 096-149027.

B. 18. 2. Technical Data

General Technical Data	
Weight (empty)	7.48 kg
Maximum Permissible Load	14 x 75 g
Radius max. / min.	153 mm / 80 mm
Angle	34°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	8500 rpm
Maximum RCF-Value at n_{max}	12359 x g
K-Factor at n_{max}	2142
Acceleration / Braking Time	85 s / 80 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	23 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	8500 rpm	8500 rpm
Maximum RCF-Value at n_{max}	12359 x g	12359 x g
K-Factor at n_{max}	2142	2142
Acceleration / Braking Time	80 s / 85 s	80 s / 80 s
Maximum Speed at 4 °C	8500 rpm	7800 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	4 °C	10 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	10000 rpm	9250 rpm
Maximum RCF-Value at n_{max}	17105 x g	14636 x g
K-Factor at n_{max}	1640	1917
Acceleration / Braking Time	100 s / 95 s	95 s / 90 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	26 °C	21 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	10000 rpm	9250 rpm
Maximum RCF-Value at n_{max}	17105 x g	14636 x g
K-Factor at n_{max}	1640	1917
Acceleration / Braking Time	100 s / 100 s	95 s / 95 s
Maximum Speed at 4 °C	9000 rpm	8100 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	12 °C	15 °C



B. 18. 3. Accessories

Article No.	Description
Accessories	
021-149027	Replacement O-ring Kit
Adapters used for Laboratory Use	
010-0377	50 ml Nalgene Oak Ridge tube
010-1147	30 ml Nalgene Oak Ridge tube
010-0376	16 ml Nalgene Oak Ridge tube
010-1311	10 ml Nalgene Oak Ridge tube / 12 ml round tube
Adapters used for IVD	
75100378	15 ml conical tube
010-1340	15 ml nunc conical tube and filtration devices

B. 18. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of F13-14x50c Rotor
in a Thermo Fisher Scientific Centrifuge.
MFG No: 096-145001 and 096-149027

Report No. 46-09 A

Report prepared for: Thermo Fisher Scientific
Issue Date: 22nd July 2009

Test Summary

A Piramoon technologies Inc. Fiberlite F13-14X50cy (max speed 13,000rpm) rotor was containment tested in a Thermo Fisher Scientific centrifuge at 13,000rpm, using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill within the rotor.

Report Written By

Report Authorised By

NOTICE This certificate is also valid for 75003661.



B. 19. Fiberlite F14-6 x 250 LE

B. 19. 2. Technical Data

B. 19. 1. Items Supplied

Article No.	Item	Quantity
75003662*	Fiberlite F14-6 x 250 LE	1
50158588	GP rotors information card	1

* Identical with 096-062153.

General Technical Data	
Weight (empty)	8.39 kg
Maximum Permissible Load	6 x 400 g
Radius max. / min.	137 mm / 37 mm
Angle	23°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	11 000 rpm	10 000 rpm
Maximum RCF-Value at n_{\max}	18 533 x g	15 317 x g
K-Factor at n_{\max}	2 737	3 312
Acceleration / Braking Time	90 s / 95 s	90 s / 85 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	19 °C	19 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	11 000 rpm	10 000 rpm
Maximum RCF-Value at n_{\max}	18 533 x g	15 317 x g
K-Factor at n_{\max}	2 737	3 312
Acceleration / Braking Time	95 s / 100 s	85 s / 90 s
Maximum Speed at 4 °C	10 400 rpm	9 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	11 °C	17 °C



B. 19. 3. Accessories

Article No.	Description
Accessories	
021-062153	Replacement O-ring Kit
Adapters used for Laboratory Use	
010-1119	85 ml Nalgene Oak Ridge tube
010-1072	30 ml Nalgene Oak Ridge tube / 38 ml round tube
010-1074	16 ml Nalgene Oak Ridge tube
389	10 ml Nalgene Oak Ridge tube / 12 ml round tube (each)
010-0138	50 ml Nalgene Oak Ridge tube
Adapters used for IVD	
75100136	50 ml conical tube
010-1410	15 ml conical tube

B. 19. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

**Containment testing of F14-6x250
Rotor in a Thermo Fisher Scientific
Centrifuge includes items 096-062153
and 096-062034.**

Report No. 46-09 B

Report prepared for: Thermo Fisher Scientific
Issue Date: 22nd July 2009

Test Summary

A Piramoon technologies Inc. Fiberlite F14-6X250y (max speed 14,000rpm) rotor was containment tested in a Thermo Fisher Scientific centrifuge at 14,000rpm, using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill within the rotor.

Report Written By

Report Authorised By

NOTICE This certificate is also valid for 75003662.



B. 20. Fiberlite F15-6 x 100y

B. 20. 1. Items Supplied

Article No.	Item	Quantity
75003698*	Fiberlite F15-6 x 100y	1
50158588	GP rotors information card	1

* Identical with 096-069031.

B. 20. 2. Technical Data

General Technical Data	
Weight (empty)	3.63 kg
Maximum Permissible Load	6 x 126 g
Radius max. / min.	98 mm / 25 mm
Angle	25°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	15 000 rpm
Maximum RCF-Value at n_{max}	24 652 x g
K-Factor at n_{max}	1 536
Acceleration / Braking Time	50 s / 60 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	22 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{max}	24 652 x g	24 652 x g
K-Factor at n_{max}	1 536	1 536
Acceleration / Braking Time	50 s / 65 s	50 s / 60 s
Maximum Speed at 4 °C	14 000 rpm	12 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	9 °C	14 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	13 000 rpm
Maximum RCF-Value at n_{max}	18 516 x g
K-Factor at n_{max}	2 045
Acceleration / Braking Time	50 s / 60 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	19 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	13 000 rpm	13 000 rpm
Maximum RCF-Value at n_{max}	18 516 x g	18 516 x g
K-Factor at n_{max}	2 045	2 045
Acceleration / Braking Time	50 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	13 000 rpm	12 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	1 °C	7 °C



B. 20. 3. Technical Data

General Technical Data	
Weight (empty)	3.63 kg
Maximum Permissible Load	6 x 126 g
Radius max. / min.	98 mm / 25 mm
Angle	25°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	1 536	1 536
Acceleration / Braking Time	45 s / 60 s	50 s / 60 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	23 °C	23 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 000 rpm	15 000 rpm
Maximum RCF-Value at n_{\max}	24 652 x g	24 652 x g
K-Factor at n_{\max}	1 536	1 536
Acceleration / Braking Time	50 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	15 000 rpm	12 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	4 °C	11 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	13 000 rpm	13 000 rpm
Maximum RCF-Value at n_{\max}	18 516 x g	18 516 x g
K-Factor at n_{\max}	2 045	2 045
Acceleration / Braking Time	45 s / 60 s	50 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	16 °C	16 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	13 000 rpm	13 000 rpm
Maximum RCF-Value at n_{\max}	18 516 x g	18 516 x g
K-Factor at n_{\max}	2 045	2 045
Acceleration / Braking Time	50 s / 65 s	50 s / 65 s
Maximum Speed at 4 °C	13 000 rpm	12 200 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-2 °C	3 °C



B. 20. 4. Accessories

Article No.	Description
Accessories	
021-069031	Replacement O-ring Kit
Adapters used for Laboratory Use	
75003102	50 ml Nalgene Oak Ridge tube
76002906	16 ml Nalgene Oak Ridge tube
75003093	10 ml Nalgene Oak Ridge tube / 12 ml round tube
75003092	6.5 ml round bottom tube
75003094	30 ml Nalgene™ Oak Ridge tube / 38 ml round tube
Adapters used for IVD	
75003103	50 ml conical tube
75003095	15 ml conical tube
75003091	1.5/2 ml Microtube

B. 20. 5. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of Fiberlite F15-6x100y Rotor in the Thermo Fisher Scientific Centrifuge

Report No. 59-09 B

Report prepared for: Thermo Fisher Scientific
Issue Date: 22nd April 2010

Test Summary

A Piramoon Technologies Inc. Fiberlite F15-6x100y (max speed 15,000rpm) rotor was containment tested in the Thermo Fisher Scientific centrifuge at 15,000rpm, using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill within the rotor.

Report Written By

Report Authorised By



B. 21. Fiberlite F15-8 x 50cy

B. 21. 1. Items Supplied

Article No.	Item	Quantity
75003663*	Fiberlite F15-8 x 50cy	1
50158588	GP rotors information card	1

* Identical with 096-085077.

B. 21. 2. Technical Data

General Technical Data	
Weight (empty)	4.45 kg
Maximum Permissible Load	8 x 75 g
Radius max. / min.	104 mm / 43 mm
Angle	34°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	14 500 rpm
Maximum RCF-Value at n_{max}	24 446 x g
K-Factor at n_{max}	1 063
Acceleration / Braking Time	65 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	24 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	14 500 rpm	14 500 rpm
Maximum RCF-Value at n_{max}	24 446 x g	24 446 x g
K-Factor at n_{max}	1 063	1 063
Acceleration / Braking Time	65 s / 65 s	75 s / 70 s
Maximum Speed at 4 °C	13 000 rpm	11 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	14 °C	21 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	14 500 rpm	14 500 rpm
Maximum RCF-Value at n_{max}	24 446 x g	24 446 x g
K-Factor at n_{max}	1 063	1 063
Acceleration / Braking Time	65 s / 65 s	65 s / 65 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	23 °C	23 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	14 500 rpm	14 500 rpm
Maximum RCF-Value at n_{max}	24 446 x g	24 446 x g
K-Factor at n_{max}	1 063	1 063
Acceleration / Braking Time	65 s / 70 s	65 s / 70 s
Maximum Speed at 4 °C	13 500 rpm	12 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	9 °C	19 °C



B. 21. 3. Accessories

Article No.	Description
Accessories	
021-085077	Replacement O-ring kit
Adapters used for Laboratory Use	
010-0377	50 ml Nalgene Oak Ridge tube
010-1147	30 ml Nalgene Oak Ridge tube
010-0376	16 ml Nalgene Oak Ridge tube
010-1311	10 ml Nalgene Oak Ridge tube / 12 ml round tube
Adapters used for IVD	
75100378	15 ml conical tube
010-1340	15 ml Nunc conical tube and filtration devices

B. 21. 4. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

Containment Testing of Fiberlite F15-8x50cy Rotor in the Thermo Fisher Scientific Centrifuge

Report No. 43-10

Report prepared for: Thermo Fisher Scientific
Issue Date: 22nd April 2010

Test Summary

A Piramoon Technologies Inc. Fiberlite F15-8x50cy (max speed 15,000rpm) rotor was containment tested in the Thermo Fisher Scientific centrifuge at 14,500rpm, using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill within the rotor.

Report Written By

Report Authorised By



B. 22. Fiberlite F21-48 x 2

B. 22. 1. Items Supplied

Article No.	Item	Quantity
75003664*	Fiberlite F21-48 x 2	1
50158588	GP rotors information card	1

* Identical with 096-489021.

B. 22. 2. Technical Data

General Technical Data	
Weight (empty)	2.6 kg
Maximum Permissible Load	48 x 4 g
Radius max. / min.	97 mm / 64 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	15 200 rpm
Maximum RCF-Value at n_{max}	25 055 x g
K-Factor at n_{max}	455
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{max}	25 055 x g	25 055 x g
K-Factor at n_{max}	455	455
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	4 °C	10 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{max}	15 200 rpm
Maximum RCF-Value at n_{max}	25 055 x g
K-Factor at n_{max}	455
Acceleration / Braking Time	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	21 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{max}	25 055 x g	25 055 x g
K-Factor at n_{max}	455	455
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	14 500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	4 °C	10 °C



B. 22. 3. Technical Data

General Technical Data	
Weight (empty)	2.6 kg
Maximum Permissible Load	48 x 4 g
Radius max. / min.	97 mm / 64 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 055 x g	25 055 x g
K-Factor at n_{\max}	455	455
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	22 °C	22 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 055 x g	25 055 x g
K-Factor at n_{\max}	455	455
Acceleration / Braking Time	35 s / 45 s	35 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	15 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	3 °C	7 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 055 x g	25 055 x g
K-Factor at n_{\max}	455	455
Acceleration / Braking Time	30 s / 45 s	30 s / 45 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	22 °C	22 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	15 200 rpm	15 200 rpm
Maximum RCF-Value at n_{\max}	25 055 x g	25 055 x g
K-Factor at n_{\max}	455	455
Acceleration / Braking Time	35 s / 45 s	35 s / 45 s
Maximum Speed at 4 °C	15 200 rpm	15 000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	3 °C	7 °C



B. 22. 4. Accessories

Article No.	Description
Accessories	
021-489021	Replacement O-ring Kit
Adapters used for IVD	
76003750	0.2 ml PCR tube

B. 22. 5. Biocontainment Certificate

Centre of Emergency Preparedness and Response
Health Protection Agency
Porton Down
Salisbury
Wiltshire SP4 0JG
United Kingdom



Certificate of Containment Testing

**Containment Testing of Fiberlite
F21-48X1.5 Rotor in the Thermo
Scientific GP3 Centrifuge**

Report No. 59-09 A

Report prepared for: Thermo Fisher Scientific
Issue Date: 9th December 2009

Test Summary

A Piramoon technologies Inc. Fiberlite F21-48X1.5 (max speed 15,200rpm) rotor was containment tested in the Thermo Scientific GP3 centrifuge at 15,200rpm, using the method described in Annex AA of EN 61010-2-020. The rotor was shown to contain a spill within the rotor.

Report Written By

Anna Mey

Report Authorised By

[Signature]



B. 23. Fiberlite H3-LV

B. 23. 1. Items Supplied

Article No.	Item	Quantity
75003665	Fiberlite H3-LV	1
50158588	GP rotors information card	1

* Identical with 096-029051.

B. 23. 2. Technical Data

General Technical Data	
Weight (empty)	6.5 kg
Maximum Permissible Load	2 x 1 200 g
Radius max. / min.	127 mm / 30 mm
Angle	90°
Aerosol-tight	No
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated
4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	3 600 rpm	3 600 rpm
Maximum RCF-Value at n_{\max}	1 840 x g	1 840 x g
K-Factor at n_{\max}	28 169	28 169
Acceleration / Braking Time	30 s / 35 s	30 s / 35 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	6 °C	6 °C

Performance data of the compatible refrigerated
4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	3 600 rpm	3 600 rpm
Maximum RCF-Value at n_{\max}	1 840 x g	1 840 x g
K-Factor at n_{\max}	28 169	28 169
Acceleration / Braking Time	30 s / 35 s	30 s / 35 s
Maximum Speed at 4 °C	3 600 rpm	3 600 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-7 °C	<0 °C

B. 23. 3. Accessories



Article No.	Description
Accessories	
Included	Microplate Carriers



B. 24. Fiberlite F10-6 x 100 LEX

B. 24. 2. Technical Data

B. 24. 1. Items Supplied

Article No.	Item	Quantity
75003340*	Fiberlite F10-6 x 100 LEX	1
50158588	GP rotors information card	1

* Identical with 096-069035.

General Technical Data	
Weight (empty)	3.3 kg
Maximum Permissible Load	6 x 126 g
Radius max. / min.	122 mm / 33 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 1 L centrifuges

Multifuge X1 Pro / X1 Pro-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g
K-Factor at n_{\max}	3000
Acceleration / Braking Time	45 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	21 °C

Performance data of the compatible refrigerated 1 L centrifuges

Multifuge X1R Pro / X1R Pro-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 50 s
Maximum Speed at 4 °C	10500 rpm	10000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	2 °C	7 °C

Megafuge ST1 Plus / ST1 Plus-MD	
Centrifuge Voltage	100-240 V, 50/60 Hz
Maximum Speed n_{\max}	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g
K-Factor at n_{\max}	3000
Acceleration / Braking Time	45 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance ± 2 K	21 °C

Megafuge ST1R Plus / ST1R Plus-MD		
Centrifuge Voltage	220-230 V, 50/60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 50 s
Maximum Speed at 4 °C	10500 rpm	10000 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance ± 2 K	2 °C	7 °C



B. 24. 3. Technical Data

General Technical Data	
Weight (empty)	3.3 kg
Maximum Permissible Load	6 x 126 g
Radius max. / min.	122 mm / 33 mm
Angle	45°
Aerosol-tight	Yes
Max. Autoclaving Temperature	121 °C

Performance data of the compatible ventilated 4 L centrifuges

Multifuge X4 Pro / X4 Pro-MD Multifuge X4F Pro / X4F Pro-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	13 °C	13 °C

Performance data of the compatible refrigerated 4 L centrifuges

Multifuge X4R Pro / X4R Pro-MD Multifuge X4RF Pro / X4RF Pro-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 40 s
Maximum Speed at 4 °C	10500 rpm	10500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-2 °C	5 °C

Megafuge ST4 Plus / ST4 Plus-MD Megafuge ST4F Plus / ST4F Plus-MD		
Centrifuge Voltage	208-240 V, 50/60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 50 s
Temperature increase in the sample after 1 h of continuous run, tolerance $\pm 2K$	13 °C	13 °C

Megafuge ST4R Plus / ST4R Plus-MD Megafuge ST4RF Plus / ST4RF Plus-MD		
Centrifuge Voltage	220 V, 60 Hz 220-240 V, 50 Hz 230 V, 60 Hz	120 V, 60 Hz
Maximum Speed n_{\max}	10500 rpm	10500 rpm
Maximum RCF-Value at n_{\max}	15038 x g	15038 x g
K-Factor at n_{\max}	3000	3000
Acceleration / Braking Time	45 s / 50 s	45 s / 50 s
Maximum Speed at 4 °C	10500 rpm	10500 rpm
Sample Temperature at max. Speed (ambient temp. at 23 °C, run time 2 h), tolerance $\pm 2 K$	-2 °C	5 °C



B. 24. 4. Accessories

Article No.	Description
Adapters used for Laboratory Use	
75003102	50 ml Nalgene Oak Ridge tube
76002906	16 ml Nalgene Oak Ridge tube
75003093	10 ml Nalgene Oak Ridge tube / 12 ml round tube
75003092	6.5 ml round bottom tube
75003094	30 ml Nalgene™ Oak Ridge tube / 38 ml round tube
Adapters used for IVD	
75003103	50 ml conical tube
75003095	15 ml conical tube
75003091	1.5/2 ml Microtube

B. 24. 5. Biocontainment Certificate



Public Health England
Microbiology Services
Porton Down
Salisbury
Wiltshire
SP4 0JG

Certificate of Containment Testing

**Containment Testing of
Thermo Scientific Fiberlite
F10-6 x 100 LEX rotor
(096-069035, 75003340) in a
Thermo Scientific Centrifuge
Report No. 18-022**

Report Prepared For: Thermo Fisher Scientific
Issue Date: 07 September 2018

Test Summary

Thermo Scientific Fiberlite F10-6 x 100 LEX rotor (096-069035, 75003340) was containment tested in a Thermo Scientific centrifuge at 10,500 rpm, using Annex AA of IEC 61010-2-020:2016 (3rd Ed.). The sealed rotor was shown to contain all contents.

Report Written By

Anna Moy

Name: Ms Anna Moy
Title: Biosafety Scientist

Report Authorised By

Sara Speight

Name: Mrs Sara Speight
Title: Senior Biosafety Scientist

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