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1. Test tubes and dilution tubes



1.1 PYROKONTROL® test tubes, soda lime glass

PYROKONTROL® test tubes from soda lime glass are free of detectable endotoxin (endotoxin content: < 0.015 I.U./mL) and especially suitable as test tubes for gel-clot LAL Test (in accordance with USP and Ph. Eur.). Inhibition of the gel-clot test can be excluded. Endotoxin recovery is positive at 2λ.

Product	Packaging	Article No.
PYROKONTROL® test tubes 10 x 75 mm with separate screw cap from PP, red	50	1958200
PYROKONTROL® test tubes 10 x 75 mm with mounted screw cap from PP, red	50	1958300
PYROKONTROL® test tubes 10 x 75 mm without screw connection	50	1958400

1.2 PYROKONTROL® test tubes, borosilicate glass

PYROKONTROL® test tubes from borosilicate glass are free of detectable endotoxin (endotoxin content: < 0.001 I.U./mL) and especially suitable for the LAL test using the kinetic turbidimetric or gel-clot method (according to USP and Ph. Eur.). Inhibition and enhancement of the endotoxin test can be excluded. Endotoxin recovery is ± 50 %.

Product	Packaging	Article No.
PYROKONTROL® test tubes 10 x 75 mm with mounted screw cap from PP, white	25	1958350
	50	1958360
PYROKONTROL® Test Tubes 10 x 75 mm without screw connection	50	1958150
PYROKONTROL® test tubes 9.75 x 75 mm without screw connection, for tube reader LAL-5000	50	1958600
PYROKONTROL® test tubes 7.75 x 75 mm without screw connection, for tube reader ATI-6000, PYR-032, Pyros Kinetix	50	1959000

1.3 PYROKONTROL® dilution tubes, borosilicate glass

PYROKONTROL® dilution tubes from borosilicate glass are used for sample preparation for Bacterial Endotoxin Test, such as Limulus Amebocyte Lysate test (LAL test) or recombinant Factor C test (rFC-Test). The tubes are free of detectable endotoxin (endotoxin content: < 0.002 I.U./tube). Inhibition and enhancement of the test can be excluded. Endotoxin recovery is ± 50 %. They may be re-used after depyrogenation.

Product	Packaging	Article No.
PYROKONTROL® dilution tubes 12 x 75 mm, without screw connection	50	1987600
PYROKONTROL® dilution tubes 13 x 100 mm, without screw connection	50	1958630
PYROKONTROL® dilution tubes 16 x 90 mm, with mounted metal screw cap*	70	1958650
PYROKONTROL® dilution tubes 16 x 100 mm, without screw connection	10	1958700
PYROKONTROL® dilution tubes 16 x 160 mm, without screw connection	10	1958800

* gold-colored aluminum screw cap, painted inside and with inserted rubber washer

2. Water, buffers and solutions



2.1 ACILA® LRW (LAL Reagent Water)

ACILA® LRW (LAL Reagent Water) is water according to Ph. Eur. and USP, suitable for all methods of endotoxin determination. The water is available in glass and plastic bottles.

ACILA® LRW (LAL Reagent Water) filled in glass bottle is free of detectable endotoxin (endotoxin content: < 0.001 I.U./ml) and sterile with a S.A.L. of 10^{-6} .

Product	Packaging	Article No.
ACILA® LRW 30 ml in glass bottle	10	1715004
	100	1715014
ACILA® LRW 50 ml in glass bottle	10	1715006
	100	1715007
ACILA® LRW 100 ml in glass bottle	10	1715015
	50	1715020
ACILA® LRW 500 ml in glass bottle	6	1715054
ACILA® LRW 1000 ml in glass bottle	6	1715105

ACILA® LRW (LAL Reagent Water) filled in plastic bottle is free of detectable endotoxin (endotoxin content: < 0.001 I.U./ml). The bottles are gamma-irradiation-sterilized and filled aseptically.

Product	Packaging	Article No.
ACILA® LRW 60 ml in plastic bottle <i>(on request)</i>	10	1716-0010
	200	1716-1060
ACILA® LRW 125 ml in plastic bottle <i>(on request)</i>	10	1716-0120
	96	1716-0125
ACILA® LRW 500 ml in plastic bottle <i>(on request)</i>	6	1716-0500
ACILA® LRW 1000 ml in plastic bottle <i>(on request)</i>	6	1716-1000

2.2 TrisSol® Tris buffer

TrisSol® Tris buffer is particularly suitable for use with LAL test. The lysate can be dissolved in Tris Buffer instead of water (observing the specifications of the lysate manufacturer). Thereby the buffer without color is used for dissolving lysates when the kinetic turbidimetric method is used. The buffer with color is used for the reconstitution of lysates for gel clot method. The coloring agent is an indicator of the correct pH level and process temperature.

TrisSol® Tris buffer is sterile and free of detectable endotoxins.

Product	Volume	Packaging	Article No.
TrisSol® Tris buffer, 0.05 M – pH 7.4 at 37°C	50 ml	1 vial	1715200
TrisSol® Tris buffer, 0.1 M – pH 7.4 at 37°C	50 ml	1 vial	1715215
TrisSol® Tris buffer, 0.2 M – pH 7.4 at 37°C	5.5 ml	10 vials	1715250
	55 ml	1 vial	1715255
TrisSol® Tris buffer, 0.2 M with Phenol red – pH 7.4 at 37°C	5.5 ml	10 vials	1715265

2.3 PYROKONTROL® phosphate buffer

PYROKONTROL® Phosphate buffers are sterile and free of detectable endotoxin.

Product	Volume	Packaging	Article No.
PYROKONTROL® phosphate buffer, 0.1 M – pH 6.0 <i>(on request)</i>	100 ml	10 vials	1712410
PYROKONTROL® phosphate buffer Sørensen, 1/15 M – pH 6.8	100 ml	10 vials	1712411
PYROKONTROL® phosphate buffer, 0.1 M – pH 7.0 <i>(on request)</i>	100 ml	10 vials	1712420
PYROKONTROL® potassium phosphate buffer, 0.1 M – pH 7.0 <i>(on request)</i>	100 ml	10 vials	1712430

2.4 PYROKONTROL® LAL hydrochloric acid, LAL sodium hydroxide, LAL potassium hydroxide

PYROKONTROL® LAL hydrochloric acid, LAL sodium hydroxide and LAL potassium hydroxide solutions correspond to the specifications of Ph. Eur. and USP. They contain no detectable endotoxin.

Product	Volume	Packaging	Article No.
PYROKONTROL® 0.1 N LAL hydrochloric acid	100 ml	1 vial	1712300
PYROKONTROL® 1.0 N LAL hydrochloric acid	100 ml	1 vial	1712310
PYROKONTROL® 0.1 N LAL sodium hydroxide	100 ml	1 vial	1712200
PYROKONTROL® 1.0 N LAL sodium hydroxide	100 ml	1 vial	1712210
PYROKONTROL® 0.1 N LAL potassium hydroxide <i>(on request)</i>	100 ml	1 vial	1712220
PYROKONTROL® 1.0 N LAL potassium hydroxide <i>(on request)</i>	100 ml	1 vial	1712225

2.5 PYROKONTROL® isotonic sodium chloride solution (NaCl 0.9%)

PYROKONTROL® isotonic sodium chloride solution (NaCl 0.9 %) is sterile and free of detectable endotoxin.

Product	Volume	Packaging	Article No.
PYROKONTROL® isotonic sodium chloride solution (NaCl 0.9 %)	100 ml	10 vials	1715165

3. Endotoxins (LPS)



ACILA Dr. Weidner GmbH offers endotoxins (lipopolysaccharides or LPSs) for various applications, including the Limulus Amebocyte Lysate assay (LAL test) and the pyrogen tests. They can also be used as bioindicators for the validation of depyrogenation processes or ultrafiltration.

3.1 Reference Standard Endotoxin (RSE)

The Pharmacopoeias (Europe, USA, Japan), the World Health Organization (WHO) and the Food and Drug Administration (FDA) differentiate between Reference Standard Endotoxin (RSE) and Control Standard Endotoxin (CSE). Due to the harmonization of Limulus Amebocyte Lysate Test in the three pharmacopoeias, there are only activity-identical endotoxin units since 1997:

1 I.U. (International Unit & EP Unit) = 1 E.U. (Endotoxin Unit, FDA) = 1 USP Unit

These RSE are, however, still found with different product names depending on their origin. The International Standard and the EC are available only for reference laboratories or producers of Limulus lysate, while the RSE of USP and Ph. Eur. can be purchased from ACILA.

Product	Units	Packaging	Article No.
Reference Standard Endotoxin USP	10,000 I.U. / vial	1 vial	1220200
Reference Standard Endotoxin EP	10,000 I.U. / vial	1 vial	1220211

3.2 Endotoxins as bioindicators

Endotoxins as bioindicators are mainly used for validation of depyrogenation processes or ultrafiltration. The endotoxins listed below are produced without additives to increase their heat resistance.

Contact us for endotoxins of different required concentrations.

Product	Units*	Packaging	Article No.
2.0 mg LPS <i>E. coli</i> O55:B5, lyophilized	2.0 mg / vial	1 vial	1230320
1.0 mg LPS <i>E. coli</i> O55:B5, lyophilized	1.0 mg / vial	1 vial	1230315
10.0 µg LPS <i>E. coli</i> O55:B5, lyophilized	10.0 µg / vial	10 vials	1230365
5.0 µg LPS <i>E. coli</i> O55:B5, lyophilized	5.0 µg / vial	10 vials	1230360
1.0 µg LPS <i>E. coli</i> O55:B5, lyophilized	1.0 µg / vial	10 vials	1230355
0.2 µg LPS <i>E. coli</i> O55:B5, lyophilized	0.2 µg / vial	10 vials	1230336
0.1 µg LPS <i>E. coli</i> O55:B5, lyophilized	0.1 µg / vial	10 vials	1230335
5 mg / 5 ml LPS <i>S. abortus equi</i> , liquid	5 mg / 5 ml	1 vial	1230010

* 1mg corresponds to approximately 10,000,000 units

4. Liquid Handling



4.1 PYROKONTROL® pipettes, borosilicate glass

ACILA® offers glass pipettes from borosilicate glass of different volumes. They are free of detectable endotoxin (endotoxin content: < 0.001 I.U./ml test volume).

Product	Packaging	Article No.
PYROKONTROL® glass pipettes 1 ml	10 units	1720001
PYROKONTROL® glass pipettes 2 ml	10 units	1720002
PYROKONTROL® glass pipettes 5 ml	10 units	1720005
PYROKONTROL® glass pipettes 10 ml	10 units	1720010

4.2 PYROKONTROL® Microtiter Plates

PYROKONTROL® Microtiter plates have 96 wells with flat bottom. The surface is untreated. They are sterile, free of detectable endotoxin (endotoxin content: < 0.005 I.U./ml) and glucans. The microplates are individually wrapped and are suitable for LAL Test, rFC-Test and determination of glucans.

Product	Packaging	Article No.
PYROKONTROL® Microtiter plates	50 units	1450410

4.3 Eppendorf Pipette Tips

Sterile and endotoxin-free pipette tips manufactured under eppendorf Biopur® purity standard.

Product	Packaging	Article No.
Eppendorf epT.I.P.S® - Biopur® Pipette Tips, 2 – 200 µl, 53 mm, yellow	480 Tips (5 Racks x 96 Tips)	1441610
Eppendorf epT.I.P.S® - Biopur® Pipette Tips, 50 – 1000 µl, 71 mm, blue	480 Tips (5 Racks x 96 Tips)	1441620
Eppendorf epT.I.P.S® - Biopur® Pipette Tips, 250 – 2500 µl, 115 mm, red	240 Tips (5 Racks x 48 Tips)	1441630

Individually packaged, sterile and endotoxin-free pipette tips, manufactured according to eppendorf's Biopur® purity standard.

Product	Packaging	Article No.
Eppendorf epT.I.P.S® Singles Biopur® Pipette Tips, 2 – 200 µl, 53 mm, yellow, individually packed	100 units	1441650
Eppendorf epT.I.P.S® Singles Biopur® Pipette Tips, 50 – 1000 µl, 71 mm, blue, individually packed	100 units	1441660

4.4 Eppendorf Combitips

Sterile and endotoxin-free combitips manufactured under eppendorf Biopur® purity standard.

Product	Packaging	Article No.
Eppendorf Combitips® advanced Biopur® 2.5 ml	100 units	1451650
Eppendorf Combitips® advanced Biopur® 5 ml	100 units	1451669

4.5 Eppendorf reagent reservoirs

Eppendorf Tip-Tub reagent reservoirs with Eppendorf guaranteed quality are autoclavable reagent reservoirs with a tapered bottom for holding reagents with multi-channel pipettes. They hold approx. 50 – 60 ml of reagent. Upon customer's request the reagent reservoirs can be tested by ACILA for endotoxin content (endotoxin level < 0.05 I.U. / container).

Product	Packaging	Article No.
Eppendorf Tip-Tub Reagent Reservoir 10	10 units	1450510



PYROKONTROL® sample vials are aseptically processed and free of detectable endotoxins (endotoxin content < 0.001 I.U./ml test volume).

The plastic vials are sterilized by radiation and achieve an S.A.L of 10^{-6} . The glass vials are steam sterilized and achieve an S.A.L of 10^{-3} .

PYROKONTROL® sample vials are suitable for holding and transporting liquid or solid samples for bacterial endotoxin testing, such as the LAL test (Limulus amebocyte lysate test) or rFC-Test (recombinant factor C test). The sub-visible particle content in the vials is less than 10% of the limit values indicated in the European Pharmacopoeia (Ph. Eur.) and United States Pharmacopoeia (USP).

5.1 PYROKONTROL® glass sample vials

PYROKONTROL® glass sample vials are injection bottles according to DIN EN ISO 8362 Part 1 and Part 4 of hydrolytic class I (10 ml, 20 ml) or hydrolytic class II (50 ml, 100 ml).

The vials are clear and have a 20 mm injection flange. They are sealed with a teflon-coated septum and a flange tear-off cap. For resealing, the septum has to be flanged with a simple 20 mm flange cap e.g. with by usage of a crimping tool.

The vials are usually delivered with separate labels.

PYROKONTROL® glass sample containers do not contain water. They are steam sterilized and achieve an S.A.L of 10^{-3} .

Product	Packaging	Article No.
PYROKONTROL® glass sample vial 10 ml	80 vials	1960503
PYROKONTROL® glass sample vial 20 ml	20 vials	1960502
PYROKONTROL® glass sample vial 50 ml	10 vials	1960501
PYROKONTROL® glass sample vial 100 ml	10 vials	1961001

5.2 PYROKONTROL® PETG sample vials

PYROKONTROL® PETG sample vials are square vials with a screw cap of HDPE. They are gamma radiation sterilized (S.A.L. of 10^{-6}), endotoxin-free and firmly closed. The vials are available in neutral or brown stained plastic.

Product	Packaging	Article No.
PYROKONTROL® PETG sample vial 30 ml	280 vials	1960118
PYROKONTROL® PETG sample vial 60 ml	200 vials	1960120
PYROKONTROL® PETG sample vial 125 ml	96 vials	1960125
PYROKONTROL® PETG sample vial 125 ml, brown	96 vials	1960175
PYROKONTROL® PETG sample vial 500 ml	48 vials	1960150

5.3 PYROKONTROL® PP sample vials

PYROKONTROL® sample tubes made of PP are gamma radiation sterilized (S.A.L. of 10^{-6}) and endotoxin-free. They are firmly closed and have self-standing ring and marking area.

Product	Packaging	Article No.
PYROKONTROL® PP sample vial 50 ml	25 vials	1960515

6. STERICERT® sample vials



STERICERT® Sample Vials are sterile with an S.A.L. of 10^{-6} and free of detectable endotoxin (endotoxin level < 0.001 I.U./mL test volume). The sub-visible particle content in the vials is less than 10% of the limit values indicated in the European Pharmacopoeia (Ph. Eur.) and United States Pharmacopoeia (USP).

6.1 STERICERT® glass sample vials

STERICERT® glass sample vials contain a defined quantity of *aqua ad iniectabilia*, so that with a validated sterilization procedure in autoclave an S.A.L. of 10^{-6} can be guaranteed.

Vials with volumes up to 100 mL are of hydrolytic class I (injection vials according to DIN EN ISO 8362 Part 4) and vials with bigger volumes are of hydrolytic class II (injection vials according to DIN EN ISO 8536-1). They are closed with a teflon-coated septum and a flip-top cap. Vials with volumes of 1000 mL have an uncoated septum and a flange tear-off cap.

Product	Packaging	Article No.
STERICERT® glass sample vial 30 ml	10 vials	1960300
STERICERT® glass sample vial 50 ml	10 vials	1960410
STERICERT® glass sample vial 100 ml	10 vials	1960305
STERICERT® glass sample vial 100 ml	50 vials	1960306
STERICERT® glass sample vial 1000 ml (<i>with uncoated septum</i>) *	6 vials	1960441-006

* Contact us for Teflon-coated version

6.2 STERICERT® PETG sample vials

STERICERT® PETG sample vials are neutral square vials, firmly closed with a screw cap from HDPE. They do not contain *aqua ad iniectabilia* and are therefore dry.

STERICERT® 0 PETG sample vials are individually welded in shrink foil. For transport through various clean room zones and isolators, the PETG sample vials can be welded in groups in one (STERICERT® 1), or two (STERICERT®

2) or even three (STERICERT® 3) plastic bags as well. These vials are not additionally welded in shrink foil. The sample vials are finally radiation-sterilized according to a validated procedure and reach an S.A.L. of 10^{-6} . STERICERT® 0 PETG sample vials are sterile inside. STERICERT 1, STERICERT 2 and STERICERT 3 PETG sample vials are sterile inside and outside up to the outermost sterile barrier. STERICERT® sample vials are manufactured upon request with a minimum quantity. Contact us for more information.

STERICERT® 0 PETG sample vials are firmly closed and individually welded in shrink foil. The vials are free of detectable endotoxin and sterile inside.

Product	Packaging	Article No.
STERICERT® 0 PETG sample vial 60 ml <i>(on request)</i>	200 vials	1960201
STERICERT® 0 PETG sample vial 125 ml <i>(on request)</i>	96 vials	1960206
STERICERT® 0 PETG sample vial 500 ml <i>(on request)</i>	48 vials	1960211

STERICERT® 1 PETG sample vials are firmly closed. Five vials are sealed in one transparent plastic bag and then sterilized by radiation. The sample vials are sterile inside and outside.

Product	Packaging	Article No.
STERICERT® 1 PETG sample vial 60 ml <i>(on request)</i>	5 vials	1960213
STERICERT® 1 PETG sample vial 125 ml <i>(on request)</i>	5 vials	1960220
STERICERT® 1 PETG sample vial 500 ml <i>(on request)</i>	5 vials	1960225

STERICERT® 2 PETG sample vials are firmly closed and twice welded in transparent plastic bags. For sample vials with volumes of 60 ml and 125 ml, five vials are first together welded in one plastic bag and then two of these bags are welded in another plastic bag. For sample vials with a volume of 500 ml, five bottles are together welded in two plastic bags. The final radiation sterilization leads to sterility of the sample vials and the inner plastic bags.

Product	Packaging	Article No.
STERICERT® 2 PETG sample vial 60 ml <i>(on request)</i>	10 vials	1960214
STERICERT® 2 PETG sample vial 125 ml <i>(on request)</i>	10 vials	1960260
STERICERT® 2 PETG sample vial 500 ml <i>(on request)</i>	5 vials	1960226

STERICERT® 3 PETG sample vials are firmly closed and triple-welded in transparent plastic bags. For sample vials with volumes of 60 ml and 125 ml, five vials are first welded together in one plastic bag and then two of these bags are welded in two further plastic bags. For sample vials with a volume of 500 ml, five bottles are together welded three plastic bags. The final radiation sterilization leads to sterility of the sample vials and the inner plastic bags.

Product	Packaging	Article No.
STERICERT® 3 PETG sample vial 60 ml <i>(on request)</i>	10 vials	1960215
STERICERT® 3 PETG sample vial 125 ml <i>(on request)</i>	10 vials	1960280
STERICERT® 3 PETG sample vial 500 ml <i>(on request)</i>	5 vials	1960227

7. Pharmaceutical primary packaging



7.1 PYROVAC® sample vials

PYROVAC® Sample Vials have been specially developed for the automated preparation of radiopharmaceuticals in corresponding devices from various companies. They can also serve as containers for drugs or diagnostics.

The vials are clear glass bottles made of tubular glass according to DIN EN ISO8362-1 (10ml, 20ml and 25ml) or of molded glass according to DIN EN ISO8362-4 (30ml, 50ml and 100ml), of hydrolytic class I (borosilicate glass Fiolax® from Company Schott), with attached rubber stopper Type I, (multiple piercing possible), closed with a flip-top crimp cap provided with a plastic cap made of PP. This is removed before use of the vial so that the piercing point of the septum reveals with a diameter of approx. 8 mm.

PYROVAC® Sample Vials are provided with a vacuum (approx. 10 mbar). To ensure proper sterilization, each bottle contains between 100 and 1,000 µL of water for injections, depending on its size. The vials are sterile inside with S.A.L. of 10^{-6} and free of detectable endotoxin (endotoxin level < 0.001 I.U. / mL nominal volume). They are free of visible particles. Sub-visible particle contamination is less than 10% of the limits specified in the European Pharmacopoeia (Ph. Eur.) and the US Pharmacopoeia (USP).

Product	Volume	Packaging	Article No.
PYROVAC® 10	10 ml	80 vials	1960500
PYROVAC® 15S	15 ml	10 vials	1960497
PYROVAC® 20	20 ml	10 vials	1960495
PYROVAC® 25	25 ml	10 vials	1960490
PYROVAC® 30	30ml	10 vials	1960489
PYROVAC® 50	50 ml	10 vials	1960492
PYROVAC® 100	100 ml	10 vials	1960491



ACILA® also offers products and services outside of the standard product catalog. These can be just small changes to our existing standard products, or new products that can be included in our product portfolio and services; our flexible team will be happy to help you.