

	Technical Data																
Use in	- Pharmaceutical Industry in clean rooms and isolators - For industrial, laboratory & research applications only																
Use for	- Detection of aerobic and anaerobic micro-organism - Active as well as passive air monitoring, personnel monitoring - Isolation and growth of fastidious bacteria, yeasts and molds - Neutralization of residues of disinfectants - Especially designed for use in environments with exposure to penicillins, cephalosporins and carbapenems - β-Lactamase 2G is a broad spectrum β-lactamase which can inactivate penicillins, most of the 1st, 2nd, 3rd, 4th and 5th generation cephalosporins as well as carbapenems																
Typical composition per liter	Basic medium according to Ph. Eur. 2.6.12, 2.6.13 and USP <61>, <62> <table><tr><td>Casein peptone</td><td>15 g</td><td>Lecithin (L)</td><td>0.7 g</td></tr><tr><td>Soy peptone</td><td>5 g</td><td>Polysorbate 80 (T)</td><td>5 g</td></tr><tr><td>NaCl</td><td>5 g</td><td>Glycine</td><td>2 g</td></tr><tr><td>Agar</td><td>15 g</td><td>β-Lactamase 2G</td><td></td></tr></table> This medium can be adjusted / or supplemented according to the performance criteria required.	Casein peptone	15 g	Lecithin (L)	0.7 g	Soy peptone	5 g	Polysorbate 80 (T)	5 g	NaCl	5 g	Glycine	2 g	Agar	15 g	β-Lactamase 2G	
Casein peptone	15 g	Lecithin (L)	0.7 g														
Soy peptone	5 g	Polysorbate 80 (T)	5 g														
NaCl	5 g	Glycine	2 g														
Agar	15 g	β-Lactamase 2G															
Irradiation	Irradiated at 9 – 20 kGy																
Filling volume	28 – 32 mL																
Packaging	- Triple bagged, staples of 10 plates - Transparent - High barrier foil for H₂O₂ as well as for water-vapor 6 staples of 10 plates per packaging unit - Temperature isolated handle-bag in the cardboard-boxes																
Plates per box	60 plates (6 staples with 10 plates each)																
Shelf life	12 months from production date																
Storage conditions	- Recommended storage temperature: 15 – 25 °C - Should be stored at temperatures as stable as possible - Avoid prolonged exposure to direct sunlight - Before use: it is recommended to keep the plates upright (agar on the lower part, lid on the upper part) to avoid formation of extra condensation - After use: it is recommended to keep the plates upside down (agar on the upper part, lid on the lower part) to reduce the risk of accumulation of condensation during incubation which can affect colony formation																
Label	On the side of the bottom part of the dish																

	Technical Data
Label information	• Product name: TSA+LTG+Lac2G • Expiry date: YYYYMMDD → MMM in letters (e.g.: 2026Nov04) • Lot-number • Individual number • Barcode
Barcode	• 2-dimensional (data matrix), 20 digits: • Digits 1-3: Art.-No. • Digits 4-9: Lot-Number • Digits 10-14: Individual-Number • Digits 15-20: Date (YYMMDD)
Delivery	• Temperature controlled delivery on request • For shipments of larger amounts plastic pallets in Euro-size can be used
Petri dish	• Locking lid 90 mm plate, made from polystyrene • Long incubations possible – due to high filling volume • Long expositions possible – due to specific design of plate • Incubations in vent and closed position possible
Lid positions	• All plates are delivered in the non-locked position • The plate contains 2 locked positions. If turning the lid clockwise the locked positions are in the following order: 1. Vent position 2. Closed position • Please check the recommendations for use on page 5
Place of production	PharmaMedia Dr. Müller GmbH Gustav-Throm-Str. 1, 69181 Leimen - Germany

Quality control, Certificates																																																																																																										
Certificates	Every batch of product can be obtained with a certificate of analysis (CoA):																																																																																																									
	<table><tr><td colspan="5">Physico-chemical test parameters:</td></tr><tr><td>Appearance</td><td colspan="4">Clear, yellowish</td></tr><tr><td>pH value</td><td colspan="4">7.1 – 7.5</td></tr><tr><td>Filling volume</td><td colspan="4">28 – 32 mL</td></tr><tr><td>Irradiation</td><td colspan="4">9 – 20 kGy</td></tr><tr><td colspan="5"></td></tr><tr><td colspan="5">Growth Promotion test: 10 – 100 CFU</td></tr><tr><td>S. aureus</td><td>ATCC 6538</td><td>30-35 °C</td><td>1 day</td><td>50-200%</td></tr><tr><td>E. coli</td><td>ATCC 8739</td><td>30-35 °C</td><td>1 day</td><td>50-200%</td></tr><tr><td>P. paraeruginosa</td><td>ATCC 9027</td><td>30-35 °C</td><td>1 day</td><td>50-200%</td></tr><tr><td>B. spizizenii</td><td>ATCC 6633</td><td>30-35 °C</td><td>1 day</td><td>50-200%</td></tr><tr><td>C. albicans</td><td>ATCC 10231</td><td>20-25 °C</td><td>3-5 days</td><td>50-200%</td></tr><tr><td>C. albicans</td><td>ATCC 10231</td><td>30-35 °C</td><td>3-5 days</td><td>50-200%</td></tr><tr><td>A. brasiliensis</td><td>ATCC 16404</td><td>20-25 °C</td><td>3-5 days</td><td>50-200%</td></tr><tr><td>A. brasiliensis</td><td>ATCC 16404</td><td>30-35 °C</td><td>3-5 days</td><td>50-200%</td></tr><tr><td colspan="5"></td></tr><tr><td colspan="5">Test for β-lactamase Plus activity: 10,000 – 100,000 CFU</td></tr><tr><td>S. aureus</td><td>ATCC 6538</td><td>30-35 °C</td><td>1 day</td><td>No inhibition</td></tr><tr><td colspan="5">No inhibition by penicillin (10 IU), Meropenem (10 µg), Ertapenem (10 µg), Ceftriaxon (30 µg) and Cefazolin (30 µg)</td></tr><tr><td colspan="5"></td></tr><tr><td colspan="4">Sterility control</td><td>No growth</td></tr></table>	Physico-chemical test parameters:					Appearance	Clear, yellowish				pH value	7.1 – 7.5				Filling volume	28 – 32 mL				Irradiation	9 – 20 kGy									Growth Promotion test: 10 – 100 CFU					S. aureus	ATCC 6538	30-35 °C	1 day	50-200%	E. coli	ATCC 8739	30-35 °C	1 day	50-200%	P. paraeruginosa	ATCC 9027	30-35 °C	1 day	50-200%	B. spizizenii	ATCC 6633	30-35 °C	1 day	50-200%	C. albicans	ATCC 10231	20-25 °C	3-5 days	50-200%	C. albicans	ATCC 10231	30-35 °C	3-5 days	50-200%	A. brasiliensis	ATCC 16404	20-25 °C	3-5 days	50-200%	A. brasiliensis	ATCC 16404	30-35 °C	3-5 days	50-200%						Test for β-lactamase Plus activity: 10,000 – 100,000 CFU					S. aureus	ATCC 6538	30-35 °C	1 day	No inhibition	No inhibition by penicillin (10 IU), Meropenem (10 µg), Ertapenem (10 µg), Ceftriaxon (30 µg) and Cefazolin (30 µg)										Sterility control				No growth
	Physico-chemical test parameters:																																																																																																									
	Appearance	Clear, yellowish																																																																																																								
	pH value	7.1 – 7.5																																																																																																								
	Filling volume	28 – 32 mL																																																																																																								
	Irradiation	9 – 20 kGy																																																																																																								
	Growth Promotion test: 10 – 100 CFU																																																																																																									
	S. aureus	ATCC 6538	30-35 °C	1 day	50-200%																																																																																																					
	E. coli	ATCC 8739	30-35 °C	1 day	50-200%																																																																																																					
	P. paraeruginosa	ATCC 9027	30-35 °C	1 day	50-200%																																																																																																					
	B. spizizenii	ATCC 6633	30-35 °C	1 day	50-200%																																																																																																					
	C. albicans	ATCC 10231	20-25 °C	3-5 days	50-200%																																																																																																					
	C. albicans	ATCC 10231	30-35 °C	3-5 days	50-200%																																																																																																					
	A. brasiliensis	ATCC 16404	20-25 °C	3-5 days	50-200%																																																																																																					
A. brasiliensis	ATCC 16404	30-35 °C	3-5 days	50-200%																																																																																																						
Test for β-lactamase Plus activity: 10,000 – 100,000 CFU																																																																																																										
S. aureus	ATCC 6538	30-35 °C	1 day	No inhibition																																																																																																						
No inhibition by penicillin (10 IU), Meropenem (10 µg), Ertapenem (10 µg), Ceftriaxon (30 µg) and Cefazolin (30 µg)																																																																																																										
Sterility control				No growth																																																																																																						
Certificate of origin	All media lots produced by PMM can be obtained with a Certificate of Origin (CoO). All animal derived raw materials are specified as follows: • Raw material • Tissue • Animal source • Country of origin • Infectivity category (acc. to TSE guideline: EMA/410/01 current version)																																																																																																									
BSE policy	In compliance with the current note for guidance on minimizing the risk of transmitting animal spongiform encephalopathy via human or veterinary medicinal products, we check the CoO of raw material in respect to the specified animal source, the country of origin and the infectivity category. We neither store or process ruminant raw materials obtained from high infectivity tissues (IA) nor ruminant raw materials whose animal source originates from countries or regions with an undetermined risk (cat C/GBR IV).																																																																																																									
Temperature stress	Art. 214.0060 has been exposed to temperature stress conditions (3 days at 2-8 °C as well as 3 days at 30-35 °C) and has passed shelf-life testing at least 30 days after the assigned expiry date. Shelf-life testing comprises all regular tests which are part of the normal release test of this article except for sterility control (see CoA).																																																																																																									

	Quality control, Certificates					
Inactivation of β -Lactam-antibiotics: Test procedure	Test procedure: 100 μ L of test suspension Mac Farland 0.5 were inoculated on a 90mm TSA+LTG-β-Lactamase 2G plate (art.-No. 214.0060). Test disks were applied on the plate directly after inoculation with the test strain. Tests were performed in double. Reference plate used was TSA+LTHT 90mm CSG (art. 200.0060).					
	Result: see table: All tested disks with β -lactam antibiotics with the exception of ceftazidime were inactivated by PMM TSA+LTG+ β -lactamase 2G plate. As observed before, <i>E. coli</i> seems to be the most sensitive test strain, although due to the qualitative test procedure performed here only with ceftazidime a difference to the other test strain was observed.					
	Additional tests showed clearly better inactivation of β -lactam antibiotics by the TSA+LTG+β-Lactamase 2G plates compared to older generation β -lactamase plates (like TSA+LTG+ β -lactamase +) with at least the following β -lactam antibiotics: Ceftazidim, Cefotaxim, Ceftriaxone, Cefixim and Cefepim as well as a mix of Amoxicillin/Clavulinate					
Inactivation of β -Lactam-antibiotics: Test results Disk test	Antibiotic Disk	Name Test Disk	<i>P. paraeruginosa</i> ATCC 9027	<i>B. spizizenii</i> ATCC 6633	<i>E. coli</i> ATCC 8739	<i>S. aureus</i> ATCC 6538
	Ampicillin 25 μ g	AMP-25	++	++	++	++
	Sulbactam 10 μ g/Amp 20 μ g	SAM-30	++	++	++	++
	Amxicillin 25 μ g	AML-25	++	++	++	++
	Amoxicillin / Clavulinate 30 μ g	AMC-30	++	++	++	++
	Piperacillin 100 μ g	PRL-100	++	++	++	++
	Piperazillin 30 mg/Tazobactam 10 μ g	TZB-40	++	++	++	++
	Penicillin V 10 μ g	PV-10	++	++	++	++
	Penicillin 10 IE	P-10	++	++	++	++
	Oxacillin 5 μ g	Ox-5	++	++	++	++
	Nafcillin 1 μ g	NF-1	++	++	++	++
	Cefazolin 30 μ g	KZ-30	++	++	++	++
	Cephalexin 30 μ g	CL-30	++	++	++	++
	Cephadroxil 30 μ g	CFR-30	++	++	++	++
	Cefuroxim 30 μ g	CXM-30	++	++	++	++
	Cefprozil 30 μ g	CPR-30	++	++	++	++
	Ceftazidim 10 μ g	CAZ-10	+	++	○	++
	Ceftazidim 30 μ g	CAZ-30	+	+	○	++
	Cefotaxim 30 μ g	CTX-30	++	++	++	++
	Ceftriaxon 30 μ g	CRO-30	++	++	++	++
	Cefoxim-5 μ g	CFM-5	++	++	++	++
	Cefpodoxim 10 μ g	CPD-10	++	++	++	++
	Ceftiofur 30 μ g	EFT-30	++	++	++	++
	Cefepim 30 μ g	FEP-30	++	++	++	++
	Meropenem 30 μ g	MEM-10	++	++	++	++

	Recommendations for use
Aerobic incubation	- The closed position provides ideal incubation conditions for aerobic microorganisms - Limits the dehydration of the agar during incubation - For long incubation of aerobic microorganisms, the closed position is recommended To lock the lid in the closed position, turn the lid clockwise into the final stop position
Anaerobic incubation	- The vent position is ideal for anaerobic incubations, as it allows an easy and effective removal of oxygen under anaerobic incubation conditions - Incubate in anaerobic incubator, anaerobic jar or suitable equipment 1. First option: - Turn the lid clockwise into the final stop position - Turn the lid one click counterclockwise to the vent position 2. Second option: Turn the lid clockwise directly into the first locked position

	Safety Data
Toxic ingredients	None
Basic composition	See typical composition
Solvent content	None
Safety data sheet required	Not mandatorily required