



TRINOVABIOCHEM

European Distributor of **MOLTOX**[®]

GENETIC TOXICOLOGY

Quality Products for *in vitro* and Genetic Toxicology

PRODUCT LIST 2024



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TRINOVA BIOCHEM is the European distributor of MOLTOX® (USA), offering a complete family of products for the conduct of genetic toxicity assays with emphasis on microbial mutagenicity.

The portfolio includes:

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► S9 AND METABOLIC ACTIVATION PRODUCTS

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
11-05L.1	S9 SD rat liver PB/BNF in KCl	lyophilized	-20°C	1.1 ml/vial
11-05L.2	S9 SD rat liver PB/BNF in KCl	lyophilized	-20°C	2.1 ml/vial
11-05L.5	S9 SD rat liver PB/BNF in KCl	lyophilized	-20°C	5 ml/vial
11-102.2	S9 SD rat liver uninduced in KCl	frozen	-80°C	2 ml/vial
11-102.5	S9 SD rat liver uninduced in KCl	frozen	-80°C	5 ml/vial
11-105.1	S9 SD rat liver PB/BNF in KCl	frozen	-80°C	1 ml/vial
11-105.2	S9 SD rat liver PB/BNF in KCl	frozen	-80°C	2 ml/vial
11-105.5	S9 SD rat liver PB/BNF in KCl	frozen	-80°C	5 ml/vial
11-404L	MUTAZYME™ 10% S9 Mix, SD rat liver PB/BNF	lyophilized	-20°C	20 ml/vial
11-405L	MUTAZYME™ 5% S9 Mix, SD rat liver PB/BNF	lyophilized	-20°C	20 ml/vial
11-406.3L	MUTAZYME™ 30% S9 Mix, SD rat liver PB/BNF	lyophilized	-20°C	3.25 ml/vial
15-05L.5	S9 GS hamster liver PB/BNF in KCl	lyophilized	-20°C	5 ml/vial
15-104.5	S9 GS hamster liver uninduced in KCl	frozen	-80°C	5 ml/vial
15-205.1	S9 GS hamster liver PB/BNF in KCl	frozen	-80°C	1 ml/vial
15-205.5	S9 GS hamster liver PB/BNF in KCl	frozen	-80°C	5 ml/vial

► NADPH REGENERATING SYSTEM REAGENTS

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
22-164	NADP 0.5M		-20°C	0.5 ml
60-200.15	NADPH Regensys™ A		2-8°C	15 ml
60-200.40	NADPH Regensys™ A		2-8°C	40 ml
60-200.50	NADPH Regensys™ A		2-8°C	50 ml
60-201.15L	NADPH Regensys™ B	lyophilized	-20°C	46 mg
60-201.4L	NADPH Regensys™ B	lyophilized	-20°C	123 mg
60-201.5L	NADPH Regensys™ B	lyophilized	-20°C	153 mg
60-203.1	Glucose-6-Phosphate		RT	2 g

► PREPARED BACTERIOLOGICAL MEDIA / AGAR PLATES

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
21-100.1	Nutrient Agar plates Oxoid #2		RT	10/sleeve
21-199	EC TRI PC™ VBE plates		2-8°C	5/sleeve
21-200	ST QUAD PC™ plates		2-8°C	5/sleeve
21-201	Ampicillin Master plates		2-8°C	5/sleeve
21-202	Ampicillin/Tetracycline Master plates		2-8°C	5/sleeve
21-203	His/Bio Master plates	30 ml/dish	RT	10/sleeve
21-40S296	Phenotype Confirmation plates	6-well plates	2-8°C	2/sleeve
21-40S10	Minimal Glucose Agar plates, 0.4% Glucose	25 ml/dish	RT	500/case
21-400.2	Minimal Glucose Agar plates	30 ml/dish	RT	20/sleeve
21-400.5	Minimal Glucose Agar plates	30 ml/dish	RT	500/case
21-40S19	Minimal Glucose Agar plates	6-well plates	RT	2/sleeve
21-40S294	Minimal Glucose Agar plates, 0.4% Glucose	24-well plates	2-8°C	2/sleeve
21-40S21	Minimal Glucose Agar plates	25 ml/dish	RT	500/case
CM-526-EA	Bacto Agar		RT	454g

► PREPARED TOP AGAR / MEDIA / BUFFER

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
26-300	Phenotype Test Packet		2-8°C	4/pk
26-501.300	Top Agar 0,7%		RT	300 ml
26-502.300	Top Agar, L-Tryptophan		RT	300 ml
26-503.100	Top Agar, Histidine/Biotin		RT	100 ml
26-503.300	Top Agar, Histidine/Biotin		RT	300 ml
26-721.1	Top Agar, 0.05mM His/Bio/Tryp		RT	100 ml
26-505.100	Nutrient Broth Oxoid #2		RT	100 ml
26-505.300	Nutrient Broth Oxoid #2		RT	300 ml
26-510.039A	Phosphate buffer 0.2M		RT	100 ml
26-510.047A	Phosphate buffer 0.2M		RT	500 ml
26-543.039A	Phosphate buffer 0.1M (for μ Ames test kit)		RT	100 ml
26-511	Glucose-6-phosphate		-20°C	2 ml
26-512.020	MgCl ₂ /KCl solution		RT	20 ml

► REAGENTS

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
26-550.039A	50X VBE	non-sterile	RT	100 ml
26-550.047A	50X VBE	non-sterile	RT	500 ml
26-551.047A	40% D-Glucose	sterile	RT	500 ml
26-700.039A	Histidine/Biotin solution	0.5 mM, sterile	2-8°C	100 ml
26-701.1	L-Tryptophan solution	0.5 mM, sterile	2-8°C	100 ml
26-702	Biotin solution	0.5 mM, sterile	2-8°C	100 ml
26-804	Ampicillin solution	8 mg/ml, sterile	2-8°C	10 ml
26-805	Tetracycline solution	0.8 mg/ml, sterile	2-8°C	10 ml

► **CONTROLCHEM™ (CC) PRODUCTS**

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
60-100	CC Mitomycin C	5 µg/vial	2-8°C	5/pack
60-101	CC ICR191	10 µg/vial	2-8°C	5/pack
60-102	CC Daunomycin	60 µg/vial	2-8°C	5/pack
60-103	CC Sodium azide	15 µg/vial	2-8°C	5/pack
60-104	CC 2-Aminofluorene	100 µg/vial	2-8°C	5/pack
60-107	CC 2-Aminoanthracene - 2AA	100 µg/vial	2-8°C	5/pack
60-108	CC Methylmethanesulfonate - MMS	25 µl/vial	2-8°C	5/pack
60-111	CC 2-Nitrofluorene	20 µg/vial	2-8°C	5/pack
60-113	CC Cyclophosphamide	1 mg/vial	2-8°C	5/pack
60-114	CC Benzo(a)pyrene	200 µg/vial	2-8°C	5/pack
60-115	CC Ethylmethanesulfonate - EMS	20 µl/vial	2-8°C	5/pack
60-118	CC Cytochalasin-B	150 µl /vial	-20°C	5/pack
60-120	CC Sodium azide	200 µg/vial	2-8°C	5/pack
60-121.1	CC 4-Nitroquinoline-N-oxide - NQO	50 µg/vial	2-8°C	5/pack
60-122	CC Danthron	500 µg/vial	-20°C	5/pack
60-147	CC 9-Aminoacridine-HCl	1 mg/vial	2-8°C	5/pack
60-900	Modified Ames Reference Oil No.1 (HC235)**		RT	30 ml/vial

► **BACTERIAL STRAINS - for Ames test -**

For phenotype confirmation use kit #31-600 (page 5, bottom)

CATALOG NO.	DESCRIPTION		STORAGE	SIZE
	STDisc™ - Salmonella typhimurium strains*			
71-097L	STDisc TA97a	lyophilized	2-8°C	10 discs/vial
71-098L	STDisc TA98	lyophilized	2-8°C	10 discs/vial
71-100L	STDisc TA100	lyophilized	2-8°C	10 discs/vial
71-102L*	STDisc TA102*	lyophilized	2-8°C	10 discs/vial
71-1535L	STDisc TA1535	lyophilized	2-8°C	10 discs/vial
71-1537L	STDisc TA1537	lyophilized	2-8°C	10 discs/vial
71-1538L	STDisc TA1538	lyophilized	2-8°C	10 discs/vial
	ECDisc™ - Escherichia coli strains*			
72-002L	ECDisc WP2 <i>trp</i> , <i>pKM101</i>	lyophilized	2-8°C	10 discs/vial
72-003L	ECDisc WP2 <i>trp</i> , <i>uvrA</i> , <i>pKM101</i>	lyophilized	2-8°C	10 discs/vial
72-187L	ECDisc WP2 <i>trp</i>	lyophilized	2-8°C	10 discs/vial
72-188L	ECDisc WP2 <i>trp</i> , <i>uvrA</i>	lyophilized	2-8°C	10 discs/vial

Please note:

In Germany, *S. typhimurium* and *E. coli* bacterial strains are classified as animal disease pathogens (epizootic pathogens) of risk group 1. **Please check for appropriate regulations in your country!**

Salmonella typhimurium strains (TA) are for use in the bacterial mutagenesis assay described by Maron and Ames. *Escherichia coli* strains (WP2 derivatives) are for use in the bacterial mutagenesis assay as described by Green and Muriel.

Bacterial strains *S. typhimurium* and *E. coli* are lyophilized and stabilized and for use as culture inoculum.

The bacterial strains contained in STDiscs™ and ECDiscs™ are potential etiologic agents and are intended for use only by those skilled in the safe handling of potentially infectious agents.

* according to the German "Gentechnikgesetz" TA102 and TA1535/pSK1002 have been classified as "genetically modified organism" (GMO/GVO) of risk group 1 / BSL1.

** prepared for use in the "Modified" Ames test for petroleum oils as described in the Standard Test method for Determining Carcinogenic Potential of Virgin Base Oils in Metalworking Fluids. ASTM E1687. ASTM International.

▶ AMES PLATE INCORPORATION ASSAY KITS

CAT.-NO.	DESCRIPTION	SIZE
31-500	µAmes 471 Bacterial Mutation Test Kit <ul style="list-style-type: none"> ▪ Lyophilized strains Salmonella TA98, TA100, TA1535, TA1537 and E. coli WP2 <i>trp</i>, <i>uvrA</i> (2 discs/vial each) ▪ 10% S9 Mix (MUTAZYME™) lyophilized ▪ 24-well plates with Minimal 0.4% Glucose Agar (22 dishes), Nutrient Agar plates (20 dishes) ▪ CONTROLCHEM™ pre-weighted positive control chemicals: Sodium azide, 9-Aminoacridine-HCl, 2-Nitrofluorene, 4-Nitroquinoline-N-oxide, 2-Aminoanthracene, Benzo(a)pyrene ▪ Nutrient Broth, Top Agar His/Bio/Tryp, Phosphate buffer, sterile/deionized Water ▪ Phenotype confirmation plates and 4 types of antibiotic discs ▪ Instruction manual <p>Each kit contains more than enough reagents to test one chemical at 8 dose levels in triplicate, with and without S9 with concurrent positive (in triplicate) and solvent/vehicle (12 replicate wells) on one occasion of testing. It may be used with any E. coli or Salmonella tester strains including TA97a and TA102, if required. Additional 24-well plates for larger experiments can be purchased separately.</p>	1 sample kit
31-100.2	Salmonella Mutagenicity Complete Test Kit <ul style="list-style-type: none"> ▪ STDisc™ TA98, TA100, TA1535, TA1537 (10 discs/vial each) ▪ Lyophilized S9 (2 vials á 2,1 ml) ▪ NADPH Regensys™ (40 ml Regensys A & 123 mg Regensys B) ▪ CONTROLCHEM™ pre-weighted positive control chemicals: ICR191, Daunomycin, Sodium azide, 2-Aminoanthracene ▪ Nutrient broth, Top Agar Histidine/Biotin, ST QUAD PC™ plates ▪ Minimal Glucose Agar (MGA) plates (160 dishes), Nutrient Agar plates (20 dishes) ▪ Instruction Manual <p>Includes the materials needed to perform the Ames Mutagenicity Plate Incorporation Assay.</p>	1 sample kit
31-101	E. coli Mutagenicity Complete Test Kit <ul style="list-style-type: none"> ▪ ECDisc™ WP2 <i>trp</i> and WP2 <i>trp</i>, <i>uvrA</i> (10 discs/vial each) ▪ Lyophilized S9 (2 vials á 2,1 ml) ▪ NADPH Regensys™ (15 ml Regensys A & 46 mg Regensys B) ▪ CONTROLCHEM™ pre-weighted positive control chemicals: Methylmethanesulfonate, 2-Aminoanthracene ▪ Nutrient broth, Top Agar L-Tryptophan, EC TRI PC™ plates ▪ Minimal Glucose Agar (MGA) plates (80 dishes), Nutrient Agar plates (20 dishes) ▪ Instruction Manual <p>Similar to the Salmonella Mutagenicity Complete Test Kit but with E. coli WP2 strains (<i>trp</i> / <i>trp</i>, <i>uvrA</i>).</p>	1 sample kit

▶ PHENOTYPE TEST KIT

CAT.-NO.	DESCRIPTION	SIZE
31-600	Phenotype Test Kit <ul style="list-style-type: none"> ▪ 6-well phenotype confirmation test plates ▪ 4 types of antibiotic discs for phenotype characterization <p>The MOLTOX® Phenotype Test Kit has been specially designed to confirm all the phenotype characteristics listed by the OECD 471 guideline in any of the E. coli and Salmonella strains used in the Ames test.</p>	kit to test 6 strains

► **MICROTITER FLUCTUATION ASSAY KITS**

CAT.-NO.	DESCRIPTION	SIZE
31-300	Moltox FT™ TA98/TA100 Mutagenicity Test Kit <ul style="list-style-type: none"> ▪ STDisc™ TA98 and TA100 (2 discs/vial each) ▪ FT™ Growth medium, FT™ Exposure medium, FT™ Reversion Indicator medium ▪ Ampicillin, 55 mg/vial ▪ 30% MUTAZYME™ S9 Mix, SD rat liver, 3.25 ml, lyophilized ▪ Positive controls: 2-Aminoanthracene, 4-Nitroquinoline-N-oxide, 2-Nitrofluorene ▪ Instruction Manual <p>Reagents provided are sufficient to perform 3 test materials with no replicates or 1 sample in triplicate, +/- S9 at various concentrations (≤ 6), positive controls and solvent (negative control).</p>	1 sample kit
31-301	Moltox FT™ 471 Mutagenicity Test Kit <ul style="list-style-type: none"> ▪ STDiscs™ TA98, TA100, TA1535, TA1537 and ECDisc™ WP2 <i>trp</i>, <i>uvrA</i> (2 discs/vial each) ▪ FT™ Growth medium, FT™ Exposure medium, FT™ Reversion Indicator medium ▪ Ampicillin, 55 mg/vial ▪ 30% MUTAZYME™ S9 Mix, SD rat liver, 2 x 3,25 ml, lyophilized ▪ Positive controls: 2-Aminoanthracene, 4-Nitroquinoline-N-oxide, N4-Aminocytidine, 2-Nitrofluorene, 9-Aminoacridine-HCl ▪ Instruction Manual <p>Reagents provided are sufficient to analyze 1 sample in triplicate with all 6 strains in the presence and absence of S9 at various concentrations (≤ 6), positive controls and solvent (negative control).</p>	1 sample kit
31-302	Moltox FT™ E. coli Mutagenicity Test Kit <ul style="list-style-type: none"> ▪ ECDisc™ WP2 <i>trp</i>, <i>pKM101</i> and ECDisc™ WP2 <i>trp</i>, <i>uvrA</i> (2 discs/vial each) ▪ FT™ Growth medium, FT™ Exposure medium, FT™ Reversion Indicator medium ▪ Ampicillin 55 mg/vial ▪ 30% MUTAZYME™ S9 Mix, SD rat liver, 3.25 ml, lyophilized ▪ Positive controls: 2-Aminoanthracene, 4-Nitroquinoline-N-oxide ▪ Instruction Manual <p>Reagents provided are sufficient to test 1 sample in triplicate (or 3 samples with no replicate), +/- S9 at various concentrations (≤ 6), positive controls and solvent (negative control).</p>	1 sample kit

► **UMU GENOTOXICITY TEST KIT**

CAT.-NO.	DESCRIPTION	SIZE
31-400*	Moltox UMU Genotoxicity Test Kit <ul style="list-style-type: none"> ▪ PTM™ Salmonella typhimurium TA1535/pSK1002* (2 vials) ▪ TGA Growth Culture medium, Ampicillin, B-buffer, Stop reagent, ONPG, 2-Mercaptoethanol ▪ 30% MUTAZYME™ S9 Mix, SD rat liver, 3.25 ml, lyophilized ▪ Positive controls: 2-Aminoanthracene, 4-Nitroquinoline-N-oxide ▪ Instruction Manual <p>According ISO 13829 Reagents provided are sufficient to test 3 test materials with no replicates or 1 sample in triplicate, +/- S9 at various concentrations (≤ 6), positive controls and solvent (negative control). Consists of materials to perform the UMU genotoxicity assay described by Reifferscheid, G. et al.. Salmonella strain for use in the SOS/UMU-Test is described by Oda, Y. et al..</p>	1 sample kit

► **INDIVIDUAL COMPONENTS** for MOLTOX FT™ and UMU GENOTOXICITY ASSAYS

CATALOG NO.	DESCRIPTION	STORAGE	SIZE
11-406.3L	30% MUTAZYME™ S9 Mix PB/BNF for Moltox FT™/UMU Kits	-20°C	3.25 ml
26-710.05	Moltox FT™ Exposure medium	RT	50 ml
26-710.1	Moltox FT™ Exposure medium	RT	100 ml
26-710.25	Moltox FT™ Exposure medium	RT	250 ml
26-711.3	Moltox FT™ Reversion Indicator medium	RT	300 ml
26-711.5	Moltox FT™ Reversion Indicator medium	RT	500 ml
26-712.05	Moltox FT™ Growth medium	RT	50 ml
26-712.1	Moltox FT™ Growth medium	RT	100 ml
26-712.25	Moltox FT™ Growth medium	RT	250 ml
26-714	TGA Growth Culture medium	RT	100 ml
26-715	10X TGA Growth Culture medium	RT	10 ml
22-147	Ampicillin	2-8°C	55 mg/vial
22-148	ONPG	-20°C	4.95 mg/vial
22-149	2-Mercaptoethanol	RT	100 µl
26-716	B-buffer	RT	35 ml
26-718	Stop reagent	RT	30 ml
60-157	CC 2-Aminoanthracene	2-8°C	100 µg/vial
60-157.2	CC 2-Aminoanthracene	2-8°C	2 mg/vial
60-164	CC 2-Aminoanthracene	2-8°C	50 µg/vial
60-158	CC 9-Aminoacridine-HCl	2-8°C	500 µg/vial
60-159	CC 4-Nitroquinoline-N-oxide	2-8°C	50 µg/vial
60-163	CC 4-Nitroquinoline-N-oxide	2-8°C	12.5 µg/vial
60-160	CC N4-Aminocytidine	2-8°C	2.5 mg/vial
60-161	CC 2-Nitrofluorene	2-8°C	50 µg/vial
71-098.2L	STDisc™ TA098 discs, lyophilized	2-8°C	2 discs/vial
71-100.2L	STDisc™ TA100 discs, lyophilized	2-8°C	2 discs/vial
71-1535.2L	STDisc™ TA1535 discs, lyophilized	2-8°C	2 discs/vial
71-1537.2L	STDisc™ TA1537 discs, lyophilized	2-8°C	2 discs/vial
72-002.2L	ECDisc™ E. coli WP2 <i>trp</i> , <i>pKM101</i> , lyophilized	2-8°C	2 discs/vial
72-003.2L	ECDisc™ WP2 <i>trp</i> , <i>uvrA</i> , <i>pKM101</i> , lyophilized	2-8°C	2 discs/vial
72-188.2L	ECDisc™ WP2 <i>trp</i> , <i>uvrA</i> , lyophilized	2-8°C	2 discs/vial
73-1535PSK*	PTM™ S. typhimurium TA1535/pSK1002* - for Ames test	-80°C	1 ml/vial
32-71001F	Frozen TAMix (mixture of TA7000 - TA7006) - for Ames test	-80°C	1 ml/vial

Please note:

In Germany, *S. typhimurium* and *E. coli* bacterial strains are classified as animal disease pathogens (epizootic pathogens) of risk group 1. **Please check for appropriate regulations in your country!**

Bacterial strains *S. typhimurium* and *E. coli* are lyophilized and stabilized, Salmonella typhimurium TA Mix cells are frozen. All are for use as culture inoculum.

All bacterial strains are potential etiologic agents and are intended for use only by those skilled in the safe handling of potentially infectious agents.

* according to the German "Gentechnikgesetz" TA102 and TA1535/pSK1002 have been classified as "genetically modified organism" (GMO/GVO) of risk group 1 / BSL1.

Please ask for customized high throughput screening materials!

▶ REFERENCES

- Maron D., Ames B. Revised methods for the Salmonella mutagenicity test. *Mutation Research* 113 (3-4): 173-215, 1983.
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- Reifferscheid, G, et al. A microplate version of the SOS/umu-test for rapid detection of genotoxins and genotoxic potentials of environmental samples, *Mutation Research*, 253:215-222, 1991.
- Green M.H., Muriel W.J. Mutagen testing using TRP+ reversion in *Escherichia coli*. *Mutation Research* 38(1):3-32, 1976.
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- Paolini, M., Sapigni, E., Hrelia, P., Scotti, M., Morotti, M., & Cantelli-Forti, G. (1991) Wide spectrum detection of precarcinogens in short-term bioassays by simultaneous superinduction of multiple forms of cytochrome P450 isoenzymes. *Carcinogenesis*, 12 (5), 759-66.

MOLTOX[®]
Molecular Toxicology, Inc.



Trinova Biochem GmbH is the European Distributor of MOLTOX[®]. The above list is representative of the products we have on stock in Europe. For more, please visit www.moltox.com.

The products are used by researchers and industrial microbiologists in the fields of genetic and in vitro toxicology and additional metabolic studies.

MOLTOX[®] welcomes the opportunity to provide you with custom formulations of S9, prepared bacteriological media and top agars. Preparation of these items in house can be costly and time consuming. Our labs provide a lower cost, on time solution.

In addition, each of our products are accompanied by GLP-compliant production & formulation and quality assurance certificates. Your assurance of quality and performance.

Shipping

Trinova Biochem GmbH is an AEO certificated company.

Shipments will be made Monday through Wednesday: Dry ice and blue ice within 1-2 days usually, room temperature shipments may be shipped within 2-4 days.

Transportation of frozen shipments (frozen S9) within Europe is to be done by UPS unless otherwise required.

Packing charges (incl. dry ice and the fees for the dangerous good dry ice) apply to dry and blue ice shipments. Cost of cold and room temperature shipments (lyophilized S9, NADPH, strains, media, controls, etc.) are depending on weight and volume.

Please contact our office for details.

▶ TB-MX-PdL_2024 - Errors reserved!