
ABOUT US

Molecular Toxicology, Inc. is the leading manufacturer of products used in the Salmonella and E. coli WP2 mutagenicity tests. Moltox minimal glucose agar plates, top agars, Salmonella and E. coli tester strains, frozen and lyophilized S9, MUTAZYME™, NADPH-regenerating systems and positive control chemicals are distributed worldwide. Moltox has developed microtiter plate format fluctuation tests consistent with OECD guidelines including Moltox® FT™ tests and distributes the BioReliance Ames II™ test kit.

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Molecular Toxicology, Inc.

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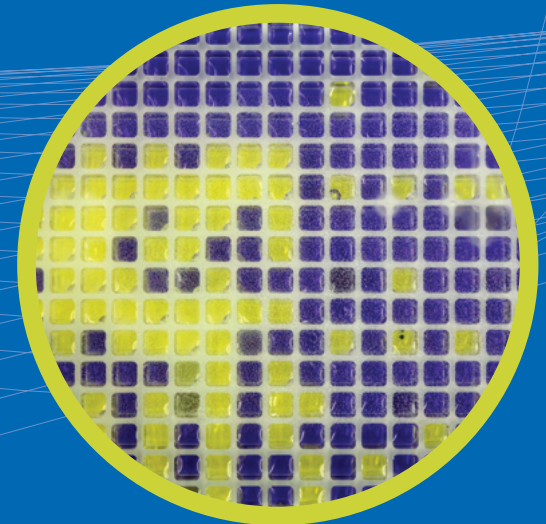
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MOLTOX®

Molecular Toxicology, Inc.

MOLTOX® FT™ E. Coli WP2 Mutagenicity Assay Kit #31-302



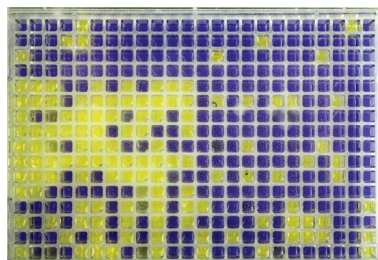
MOLTOX[®] FT[™] E. Coli WP2 Mutagenicity Assay Kit

Kit Components

Kit #31-302 includes:

PART #	DESCRIPTION
72-002.2L	EC WP2 pKM101 inocula (2 discs/vial)
72-188.2L	EC WP2 <i>uvrA</i> inocula (2 discs/vial)
26-712.05	Moltox [®] FT [™] Growth Medium (50mL)
26-710.05	Moltox [®] FT [™] Exposure Medium (50mL)
26-711.3	Moltox [®] FT [™] Reversion Indicator Medium (300mL)
11-401.3L	MUTAZYME [™] (30% s9 Mix for Moltox [®] FT [™] Kits, 3.25mL)
60-157.2	2-Aminoanthracene (2 mg/vial)
60-159	4-Nitroquinoline- <i>N</i> -oxide (50µg/vial)

User Instructions Included



384-Well
Microtiter Plate

Basis of the Test

Moltox[®] FT[™] microplate fluctuation tests estimate the mutagenic potential of a test material by measuring its ability to induce reversion of *his*⁻ *Salmonella typhimurium* or *trp*⁻ *Escherichia coli* auxotrophs to their respective prototrophic conditions. The bacterial strains used in the assays are identical to those used in conventional plate incorporation assays (Mortelmans, K and E Zeiger, *Mutat res*, 455:29-60, 2000 and Mortelmans, K and E Riccio, *Mutat res*, 455:61-69, 2000). The experimental design used in the Moltox[®] FT[™] tests is based upon D. Gatehouse's adaptation of the design reported by S. Luria and M. Delbruck in 1943 (see, *Mutat res*, 53:289-296, 1978; *Genetics*, 28:491-511, 1943). *Trp*⁻ or *his*⁻ target cell populations are treated in 24-well plates using media containing limiting L-tryptophan or L-histidine. After the treatments, the cells are transferred to 48-well sectors of 384-well microtiter dishes in a L-tryptophan-L-histidine-free medium containing a pH indicator. After 48 hours incubation, cells able to grow in the absence of L-histidine or L-tryptophan (mutant cells) will have proliferated resulting in media acidification and the appearance of yellow wells. These wells are counted and the number for each treatment condition compared to their negative control (Gilbert, RI, *Mutat res*, 74:283-289, 1980).



Advantages of the Test

- Fluctuation tests in microtiter plate format exhibit increased sensitivity and may be automated.
- By combining certain strains, costs can be reduced and test material conserved.
- Assays are conducted using activation and non-activation conditions similar to those employed in the traditional Ames test.
- Colorimetric endpoint is unambiguous and results are easily submitted to statistical analysis.
- Complies with OECD 471 Guideline for Testing of Chemicals (Bacterial Reverse Mutation Test).

