

## TA102

### Material Safety Data Sheet according to 1907/2006/EC Article 31 (REACH)

<b>1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND THE COMPANY UNDERTAKING</b>	
<b>Product name:</b>	TA102
<b>Product code:</b>	PSS-0120
<b>Synonyms:</b>	No data available
<b>Recommended uses:</b>	Not for use in humans, not for diagnostic purposes. Research use only.
<b>Supplier:</b>	Xenometrix AG, Gewerbestrasse 25, CH-4123 Allschwil, Switzerland
<b>Emergency contact numbers:</b>	+41 61 482 14 34
<b>Country of origin:</b>	Switzerland
<b>HS Code:</b>	3822.1900
<b>2. HAZARDS IDENTIFICATION</b>	
<b>Classification:</b>	According to regulation (EC) No 1272/2008[EU-GHS/CLP] not a hazardous substance or mixture. According to EU Directives 67/548/EEC or 1999/45/EC, this substance is not classified as dangerous.
<b>Label element:</b>	The product does not need to be labelled in accordance with directive 67/548/EEC.
<b>Hazard statement(s):</b>	No data available
<b>Precautionary statement(s):</b>	No data available
<b>Other hazards:</b>	PBT No data available vPvB No data available
<b>3. COMPOSITION / INFORMATION ON INGREDIENTS</b>	
<b>Product:</b>	TA102 ( <i>Salmonella enterica</i> serovar typhimurium TA102)
<b>Description:</b>	The contained bacterial material is stabilized for shipment up to 10 days at Room Temperature. The culture organism is used for bacterial mutagenetic test (Ames test culture).
<b>CAS-No:</b>	No data available
<b>Index-No:</b>	No data available
<b>Other information:</b>	Semi-solid format
<b>4. FIRST AID MEASURES</b>	
<b>Eye contact:</b>	Remove contact lenses. Rinse thoroughly with plenty of water for at least 15 minutes. If contact lenses can't remove, continue washing. Consult a physician or an expert.
<b>Skin contact:</b>	Remove contaminated clothing and wash before renew use. Wash off with soap and plenty of water. Consult a physician.
<b>Inhalation:</b>	Move person into fresh air and control respiration. If not breathing, give artificial respiration. Consult a physician.
<b>Ingestion:</b>	Never give anything by mouth to an unconscious person. Consult a physician. Never cause nausea. Rinse mouth with water. Concerned person should drink water, better milk (two glasses at most). If nausea: Beware swallowing and keeping in recovery position.
<b>5. FIRE-FIGHTING MEASURES</b>	
<b>Extinguishing media:</b>	Suitable: water spray; alcohol-resistant foam; inert gas; dry powder or carbon dioxide (CO <sub>2</sub> ); Sand or Soil. Unsuitable: direct water splash; simultaneous using of water and foam.

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**Special hazards arising from the substance or mixture:**

This product is not combustible. Fire may cause generally accumulation of: Nitrogen (NO<sub>x</sub>); Sulfuroxides (SO<sub>x</sub>); Carbondioxides (CO<sub>x</sub>); other organic and anorganic compositions.

**Advice for firefighters:**

Special protective equipment for firefighters. Wear self-contained breathing apparatus. Keeping a safe distance or by wearing suitable protective clothing.

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**6. ACCIDENTAL RELEASE MEASURES**


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<b>Personal precautions:</b>	Avoid breathing vapors, mist, dust or gas.
<b>Environmental precautions:</b>	Do not let product enter the drains or water.
<b>Methods and materials for containment and cleaning up:</b>	Ensure adequate ventilation. Avoid direct contact with the product. Evacuate personnel to safe areas. Sweep up with suitable material. Keep in suitable, closed containers for disposal. Clean up affected area.

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**7. HANDLING AND STORAGE**


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<b>Handling:</b>	Handle in accordance with good laboratory hygiene and safety practice. This product is not combustible. Firefighting measures see section 5. Open container carefully. No other information available.
<b>Storage:</b>	Store in the original container as much as possible. Recommended storage temperature: -80°C; Avoid storage with Incompatible Products: Strong oxidizing agents and acids.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**


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<b>Eye protection:</b>	Wear safety glasses with side protection.
<b>Skin protection:</b>	Wear appropriate protective gloves to prevent skin exposure.
<b>Body protection:</b>	Appropriate protective clothing, overalls.
<b>Respiratory protection:</b>	No respirators required.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**


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<b>Appearance:</b>	Dark semi-solid in a Vial
<b>Odour:</b>	No data available
<b>pH:</b>	No data available
<b>Melting point:</b>	No data available
<b>Boiling point:</b>	No data available
<b>Flash point:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Flammability:</b>	Product is not flammable or explosive
<b>Self-ignition temp.:</b>	Product is not self-igniting
<b>Danger of Explosion:</b>	Product does not present an explosion hazard
<b>lower explosion limit:</b>	No data available
<b>upper explosion limit:</b>	No data available
<b>Decomposition Temp.:</b>	No data available
<b>Kinematic Viscosity:</b>	No data available
<b>Vapor Pressure:</b>	No data available
<b>Relative Density (20°C):</b>	No data available
<b>Relative Gas Density (20°C):</b>	No data available
<b>Water Solubility (20°C):</b>	No data available
<b>Log KOW:</b>	No data available

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**10. STABILITY AND REACTIVITY**


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<b>Chemical stability:</b>	No data available.
<b>Conditions to avoid:</b>	No data available.

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**Incompatibilities with other materials:** Strong oxidizing agents and acids.

**Hazardous decomposition products:** No data available.

#### 11. TOXICOLOGICAL INFORMATION

**Acute toxicity:** LD50: No data available.  
LC50: No data available.

**Skin corrosion/irritation:** May causes skin irritation.

**Serious eye damage/eye irritation:** Causes serious eye irritation.

**Respiratory or skin sensitization:** May be harmful if inhaled. May cause headache and nausea.

**Other:** No data available.

#### 12. ECOLOGICAL INFORMATION

No data available.

#### 13. DISPOSAL CONSIDERATION

**Waste treatment methods:** Avoid discharge in environment.

**Treatment key:** Ask your local administration.

**Contaminated packaging/ product:** Collect and disposal rest of substance separately. Biological material waste must dispose in accordance with appropriate federal, state, and local regulations. Sterilize waste and rests before disposal. Don't use cleaned container for other purpose and dispose.

**Special precaution:** Sterilisation: autoclave at 2 bar pressure / 30 min. / Temp.121°C

#### 14. TRANSPORT INFORMATION

**ADR / RID** Not classified as hazardous for transport.

**IMDG** Not classified as hazardous for transport.

**IATA** Not classified as hazardous for transport.

#### 15. REGULATORY INFORMATION

Consider the employee limitations. For this product a chemical safety assessment was not carried out.

#### 16. ADDITIONAL INFORMATION

The product is a Salmonella typhimurium strain, which is designated to be used exclusively for Research & Development purposes. The TA102 strain is a derivative of the S. typhimurium LT2 strain [1] [2]. Further information on the genetic profile of TA102 is summarized in table below.

Strain	Mutation	Type	Target	Cell Wall	Repair	pKM101	pAQ1
TA102	hisΔ(G)8476	BP subst.	TAA	rfa-	uvrB+	✓	✓

**rfa-** The rfa- mutation leads to a defective lipopolysaccharide (LPS) layer that coats the cell surface, making the bacteria more permeable to bulky chemicals and non-pathogenic <sup>[1]</sup>

**uvrB+** uvrB gene encodes an enzyme component of the nucleotide excision repair system. Strains with uvrB+ have intact excision repair capability, therefore can be used to detect cross-linking agents <sup>[1]</sup>

**pKM101** This R factor plasmid enhances chemical and UV-induced mutagenesis via an error-prone recombinational DNA repair pathway. The plasmid also confers ampicillin resistance <sup>[1]</sup>

**pAQ1** This multi-copy plasmid carries the hisG428 mutation. The copy number of the plasmid is approximately 30, therefore 30 copies of the mutant gene are accessible for reverse mutation. The plasmid also confers tetracycline resistance <sup>[2]</sup>

TA102 contains plasmids that confer resistance to Ampicillin and Tetracycline antibiotics, therefore its handling must be carried out by trained personnel, and according to the relevant and applicable regulations of the country, in which the R&D activity using the TA102 strain is carried out.

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## References

- [1] Maron, D. M., & Ames, B. N. (1983). Revised methods for the Salmonella mutagenicity test. Mutation research, 113(3-4), 173–215. [https://doi.org/10.1016/0165-1161\(83\)90010-9](https://doi.org/10.1016/0165-1161(83)90010-9)
- [2] Levin, D. E., Marnett, L. J., & Ames, B. N. (1984). Spontaneous and mutagen-induced deletions: mechanistic studies in Salmonella tester strain TA102. Proceedings of the National Academy of Sciences of the United States of America, 81(14), 4457–4461. <https://doi.org/10.1073/pnas.81.14.4457>

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