

TECRA™ Unique Kits MATERIAL SAFETY DATA SHEET

COMPANY DETAILS

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A. SAFETY DIRECTIONS

The TECRA uniQue modules may contain one or more chemicals that could be hazardous. As such, only people trained in chemical and microbiological safety procedures should have access to, or use the modules.

Standard laboratory practices **must** be observed when using the modules. This includes (among other practices):

- the wearing of safety glasses
- never pipetting by mouth
- having access to safety showers and eye baths.

If large quantities of any components that could be hazardous, are ingested, a physician should be consulted without delay. Always remove contaminated clothing and wash clothing before re-use.

The Material Safety Data Sheets accompanying these Safety Directions have been based upon toxicity and safety information for undiluted materials provided by the original manufacturer of the materials or from reference books and have not been verified for the diluted concentrations used in the kits. These Data Sheets are therefore intended as **RECOMMENDED** safety guidelines only and should not be seen as definitive nor relied upon as the sole source of safety information. Each user must make his or her own assessment about the hazard potential of components in the modules and use the components in accordance with such assessment. In addition to those chemicals mentioned, the kits also contain chemicals such as sodium chloride and gelatin, which would generally be considered non-toxic in the concentrations used in the module.

All relevant Federal and State and local by-laws should be observed when disposing of materials in the modules.

Kathon CG

- Preparation and Product Information

Kathon is bacteriostatic and is found in the Conjugate in Tube 4. This tube contains 1.0mg. Thus, the amount is very low when compared to the toxic dose recorded below.

- Hazard Potential/Toxicological Properties

Kathon is widely used as a preservative.

There are no identifiable carcinogenic or mutagenic effects. Causes burns. It may cause sensitization by skin contact. Oral LD₅₀ in rats is quoted as 550mg/kg.

- Preventative Measures

Use standard laboratory safety techniques when handling this chemical, including those described in Section B.

- First Aid Measures

In case of contact with eyes, flush immediately with copious quantities of water for at least 15 minutes.

If there is skin contact, immediately flush skin with plenty of water, for at least 15 minutes. If swallowed, wash out mouth with water, provided the person is conscious. Call a physician.

Remove contaminated clothing and wash clothing before re-use.

PROPYLENE GLYCOL

- Preparation and Product Information

This is found in trace amounts in the Substrate in Tube 6.

- Hazard Potential/Toxicological Properties

This chemical is harmful if swallowed in copious amounts and may cause skin irritation if exposed for long periods.

- Preventative Measures

Use standard laboratory safety precautions when using this component, including those described in Section B. Wash any contaminated clothing before re-use. Avoid contact with strong oxidising agents or strong acids. Use in well-ventilated areas.

- First Aid Measures

In case of contact with eyes, flush immediately with copious quantities of water for at least 15 minutes. If there is skin contact, immediately wash with soap and copious amounts of water. If swallowed, wash out mouth with water, provided the person is conscious. Call a physician.

Remove contaminated clothing and wash clothing before re-use.

THIMEROSAL (Thimersal)

- Preparation and Product Information

Thimerosal is bacteriostatic and fungistatic and is found in the Wash in Tube 5. This tube contains 5×10^{-6} g of thimerosal, thus, the amount is very low when compared to the toxic doses recorded below. It is also relevant to note that, Thimerosal is commonly used as a preservative in human vaccines at low concentrations.
- Hazard Potential/Toxicological Properties

Thimerosal contains mercury. It has been reported to cause fatal poisonings, to be ototoxic and to cause hypersensitivity reactions. In laboratory experiments, it has been shown to have mutagenic properties. It has been reported that there was an increased rate of malformations in 56 children born to mothers exposed to thimerosal and possibly other drugs in the first four months of pregnancy. Other symptoms are nausea and vomiting. Oral LD₅₀ in rats is quoted from 75mg/kg upwards and an LD₅₀ of 60mg/kg has been recorded in humans.
- Preventative Measures

Use standard laboratory safety techniques when handling this chemical, including those described in Section B.
- First Aid Measures

In case of contact with eyes, flush immediately with copious quantities of water for at least 15 minutes.
If there is skin contact, immediately wash with soap and copious amounts of water.
If swallowed, wash out mouth with water, provided the person is conscious. Call a physician.
Martindale² recommends treatment of adverse effects as for mercury.

HYDROXYMETHYL AMINOMETHANE (TRIS) (TROMETAMOL)

- Preparation and Product Information

This is contained in a buffer used in Tube 1. This tube contains 0.073g. Thus, the amount is very low when compared to the toxic doses recorded below.
- Hazard Potential/Toxicological Properties

This chemical is widely used in laboratories and Martindale Pharmacopœia records its use as a therapeutic agent, but notes that damage may follow injection. It is not recorded as toxic in either references 1 or 4. However, it may be toxic if ingested in quantity and may cause irritation to the eyes. The oral LD₅₀ in rats is 5.9g/kg.

- Preventative Measures

Follow standard laboratory safety techniques including those detailed in Section B.

- First Aid Measures

In case of contact with eyes, flush immediately with copious quantities of water for at least 15 minutes.

If there is skin contact, immediately wash with soap and copious amounts of water.

If swallowed, wash out mouth with water, provided the person is conscious. Call a physician.

Remove contaminated clothing and wash clothing before re-use.

POLYOXYETHYLENESORBITAN MONOLAURATE (TWEEN 20)

- Preparation and Product Information

This is found in the Wash in Tube 5. This tube contains 2.5×10^{-3} g. Thus, the amount is very low when compared to the toxic doses recorded below.

- Hazardous Potential/Toxicological Properties

The chemical is irritating to the eyes and may be harmful if ingested. The oral LD₅₀ for rats is 37g/kg.

- Preventative Measures

Use standard laboratory safety practices, including those detailed in Section B.

- First Aid Measures

In case of contact with eyes, flush immediately with copious quantities of water for at least 15 minutes.

If there is skin contact, immediately wash with soap and copious amounts of water.

If swallowed, wash out mouth with water, provided the person is conscious. Call a physician.

Remove contaminated clothing and wash clothing before re-use.

B. STANDARD LABORATORY SAFETY TECHNIQUES

Standard laboratory practices should continue to be observed when using the modules. This would include (amongst other practices):

- the wearing of safety glasses

- never pipetting by mouth
- having access to safety showers and eye baths.

Should large quantities of any of these components be ingested, a physician should be consulted. Always remove contaminated clothing and wash clothing before re-use.

Ensure that only people trained in chemical and microbiological safety procedures, have access to, or use the module.

C. Validity

This MSDS is valid for 5 years from the date at the foot of the pages of the document.

D. REFERENCES

1. Toxic and Hazardous Industrial Chemicals and Safety Manual. Published by International Technical Information Institute, 1988.
2. Martindale, the Extra Pharmacopœia 28th Edition. Published by The Pharmaceutical Press.
3. Dangerous Properties of Industries Materials, 5th Edition. N. Irving Sax. Published by Van Nostrand Reinhold.

**THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT,
BUT DOES NOT PURPORT TO BE ALL-INCLUSIVE,
AND SHALL BE USED AS A GUIDE ONLY.**