Material Safety Data Sheet

(Prepared according to 1907/2006/EC, Article 31**)**

Revision Date: 30-April-2017

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Details:

Trade Name: **TBARS Assay Kit**

Catalog Number	Size
CA995	**96 assays**

1.2 Company Details:

Canvax Biotech SL
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C/Astronoma Cecilia Payne,
Edif. Canvax
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1.3 Toxicological Information Service:

European emergency number: 112
Italy:
CHEMTREC 800-789-767
CHEMTREC (Milan) +(39)-0245557031
Spain:
CHEMTREC 900-868538

CHEMTREC (Internacional) +(34)-931768545

For Research use only

2. HAZARDS IDENTIFICATION:

GHS Classification

Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

GHS Label elements, including precautionary statements

Pictogram:

Signal word: Warning

Hazard statements

H227 Combustible liquid.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary stratements

P210 Keep away from heat/sparks/open flames/hot surfaces.
P273 Avoid release to the environment.
P280 Wear protective gloves/clothing and eye/face protection.
P302 + P352: *If on skin*: Wash with plenty of soap and water.
P304 + P340: *If inhaled*: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: *If in eyes*: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a doctor/ physician if you feel unwell.
P332 + P313: If skin irritation occurs: Get medical advice/ attention.
P337 + P313: If eye irritation persists: Get medical advice/ attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product contains the following components and mixture of the following substances with non-hazardous additions.

Thiobarbituric Acid (TBA): 212g (solid)
Contains 100% Thiobarbituric Acid (CAS #: 504-17-6).
SDS Solution: 10 ml
Contains 1-15% dimethyl sulfoxide (CAS #: 67-68-5).
Diluent 1: 40 mL
Contains 1-20% Acetic Acid (CAS #: 64-19-7).
Diluent 2: 20 mL
Contains 10-50% NaOH (CAS #: 1310-73-2).
MDA Standard: 250 µL
Contains 0.009% Malondialdehyde bis(dimethyl acetal) (CAS #: 102-52-3).

4. FIRST AID MEASURES

Eye: Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Remove contact lenses, clean before re-use. Get immediate medical attention.

Skin: Wash with soap and water. Remove contaminated clothing and launder immediately, and discard contaminated leather goods, and wash before re-use. Get medical attention immediately if irritation develops or persists.

Inhalation: Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

Ingestion: Do not induce vomiting and seek medical attention immediately. Drink two glasses of water or milk to dilute. Provide medical care provider with this MSDS. Corrosive.

Note To Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:

Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid. Use water spray/fog for cooling.

Firefighting Techniques/Equipment: Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products.

Hazardous Combustion Products: Includes carbon dioxide, carbon monoxide, dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Keep unnecessary people away; isolate hazard area and deny entry.
Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal.
Large spills: Dike far ahead of liquid spill for later disposal. Do not flush to sewer or waterways. Prevent release to the environment if possible.

7. HANDLING AND STORAGE

Should be handled by trained personnel observing good laboratory practices.
Avoid breathing vapor.
Avoid skin contact or swallowing.
May cause allergic reaction in sensitized individuals.
Store in properly labeled containers at temperature on label

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product.
Personal Protective Equipment:
Eye: An eye wash station must be available where this product is used. Wear chemical goggles.
Skin: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Have a safety shower available.

Respiratory: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to Section 3. COMPOSITION/INFORMATION ON INGREDIENTS.
Specific Gravity/Density: Not established.
Octanol/water Partition Coeff: Not established.
Volatiles: Not established.
Evaporation Rate: Not established.
Viscosity: Not established.

10. STABILITY AND REACTIVITY

Stability: no data available
Reactivity: no data available
Conditions to avoid: no data available
Incompatible materials: no data available
Decomposition products: no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

- o Malondialdehyde bis(dimethyl acetal): LD50 Oral 2.44 mg/kg (rat)
- o Sodium dodecyl sulfate: LD50 Oral 1.288 mg/kg (rat); LC50 Inhalation >3.9 mg/m3 (rat); LD 50 Dermal 580 mg/kg (rabbit)
- o Acetic acid: LD50 Oral 3.31 mg/kg (rat); LC50 Inhalation 5620 ppm (mouse); LC50 Inhalation 11.4 mg/L (rat); LD50 Dermal 1.112 mg/kg (rabbit)
- o Sodium hydroxide: no data available

Skin corrosion/irritation

- o Malondialdehyde bis(dimethyl acetal): None (rabbit)
- o Sodium dodecyl sulfate, Sodium hydroxide, Butylated hydroxytoluene: Irritation (rabbit)
- o Acetic acid: no data available

Serious eye damage/irritation

- o Malondialdehyde bis(dimethyl acetal): None (rabbit)
- o Sodium dodecyl sulfate, Sodium hydroxide: Risk of serious damage (rabbit)
- o Acetic acid: Corrosive (rabbit)

Respiratory or skin sensitization:

- o Malondialdehyde bis(dimethyl acetal), Sodium hydroxide, Butylated hydroxytoluene: no data available
- o Sodium dodecyl sulfate: May cause respiratory irritation
- o Acetic acid: may cause skin sensitization

Germ cell mutagenicity: no data available
Carcinogenicity: no data available
Reproductive toxicity: no data available

12. ECOLOGICAL INFORMATION

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
Ecotoxicity

- o Malondialdehyde bis(dimethyl acetal): EC50 100 mg/L in 48 hrs (water flea)
- o Sodium dodecyl sulfate: LC50 3.6 mg/L in 96 hrs (rainbow trout); mortality NOEC 19.5 mg/L in 96 hrs (rainbow trout); mortality LOEC 4.6 mg/L in 8 days (fathead minnow); growth inhibition LOEC 2.68 mg/L in 6 days (algae)
- o Acetic acid: LC50 1.0 mg/L in 96 hrs (rainbow trout); EC50 300.82 mg/L in 48 hrs (water flea)
- o Sodium hydroxide: LC50 125 mg/L in 96 hrs (mosquito fish); EC50 40.38 mg/L in 48 hrs (water flea)

Mobility: no data available
Biodegradation:

- o Sodium hydroxide, Butylated hydroxytoluene: no data available
- o All other hazardous components: biodegradable

Bioaccumulation: no data available

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state or national regulations.

For small quantities: Cautiously add to a large stirred excess of water. Adjust the pH to neutral. Flush the aqueous solutions down the drain with plenty of water.

14. TRANSPORT INFORMATION

Hazard Class: 8
Subsidiary Class: none
Packing Group: II
UN-No: UN2790
Additional Transport Information: transport in accordance with local, state and national regulations.

15. OTHER INFORMATION

The above information is believed to be accurate, but does not purport to be all inclusive and shall be used only as a guide. Canvax Biotech makes no warranty, express or implied, and assumes no responsibility as to the accuracy or suitability of such information or application to the User's intended purpose or for consequences of its use. The Users should make independent decisions regarding the completeness of information based on all sources available.