Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Lipid Peroxidation (MDA/TBARS) Assay Kit (CV0017)

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommend use For research use only
Uses advised against No information available

1.3 Supplier Identification

Assay Genie
G1, The Steelworks
Foley Street
Dublin 1
Ireland
+353 (01) 8879802

For further information please contact: ***techsupport@assaygenie.com***

Section 2: Hazards identification

2.1 GHS Classification of the substance or mixture

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

2.2 GHS Label Elements & Precautionary Statements

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

Precautionary statements:
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.

Section 3: Composition/information on ingredients

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

Ingredient	Concentration	CAS No.
Thiobarbituric acid	100%	504-17-6
SDS Solution	1-15% dimethyl sulfoxide	67-68-5
Diluent 1	1-20% Acetic Acid	64-19-7
Diluent 2	10-15% NaOH	1310-73-2
MDA Standard	0.0009% Malondialdehyde bis (dimethyl acetal)	102-52-3

Section 4: First aid measures

4.1 Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact 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 contact 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.

4.2 Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Section 5: Fire-fighting measures

5.1 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.

5.2 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.

Section 6: Accidental release measurements

Keep unnecessary people away; isolate hazard area and deny entry.
Small spills: Take up with sand or other non-combustible 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

Section 7: Handling and storage

7.1 Advice on safe handling

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.

7.2 Storage conditions

Store at 2-8 °C
Keep out of the reach of children.
Keep container tightly closed.
Keep containers tightly closed in a cool, well-ventilated place.
Keep in properly labeled containers.

Section 8: Exposure controls/personal protection

8.1 Personal Protection

Eye/face protection	An eye wash station must be available where this product is used. Tightly fitting safety goggles. Face-shield.
Skin and body protection	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 protection	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.

Section 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.

Section 10: Stability and reactivity

10.1 Stability

No information available

10.2 Reactivity

No information available

10.3 Conditions to avoid

Wash hands thoroughly after handling. Wear protective gloves, clothing and eye and face protection.

10.4 Incompatible materials

None known based on information supplied.

10.5 Hazardous decomposition products

None known based on information supplied.

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Chemical Name	LD_{50} Oral	LD_{50} Dermal	LC_{50} Inhalation
Malondialdehyde bis(dimethyl acetal)	2.44 mg/kg (rat)	-	-
Sodium dodecyl sulfate	1.288 mg/kg (rat)	580 mg/kg (rabbit)	>3.9 mg/m3 (rat)
Acetic acid	3.31 mg/kg (rat)	1.112 mg/kg (rabbit)	5620 ppm (mouse); 11.4 mg/L (rat)
Sodium hydroxide	-	-	-

General advice — If symptoms persist, call a physician.

Skin Corrosion/Irritation — Malondialdehyde bis(dimethyl acetal): None (rabbit)
Sodium dodecyl sulfate, Sodium hydroxide, Butylated hydroxytoluene: Irritation (rabbit)
Acetic acid: no data available

Serious Eye Damage/Irritation	Malondialdehyde bis(dimethyl acetal): None (rabbit) Sodium dodecyl sulfate, Sodium hydroxide: Risk of serious damage (rabbit) Acetic acid: Corrosive (rabbit)
Respiratory or skin sensitization:	Malondialdehyde bis(dimethyl acetal), Sodium hydroxide, Butylated hydroxytoluene: no data available Sodium dodecyl sulfate: May cause respiratory irritation Acetic acid: may cause skin sensitization

Chronic toxicity

Carcinogenic effects	No information available.
Mutagenic effects	No information available.
Reproduction toxicity	No information available.
Teratogenic effects	No information available.
Germ cell mutagenicity	No information available.

Section 12: Ecological information

12.1 Toxicity

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

Ecotoxicity:

- Malondialdehyde bis(dimethyl acetal): EC50 100 mg/L in 48 hrs (water flea)
- 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)
- Acetic acid: LC50 1.0 mg/L in 96 hrs (rainbow trout); EC50 300.82 mg/L in 48 hrs (water flea)
- 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:

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

Bioaccumulation: no data available

Section 13: Disposal considerations

Waste disposal methods

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

Waste from residues / unused products	Dispose of in accordance with local regulations
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal
Other information	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 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
IATA: Not dangerous goods
DGR: Not dangerous goods

Section 15: Other information

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guild only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislation. The absence of warning must not, under and circumstance be taken to mean that no hazard exists.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For research use only, not for diagnostic or therapeutic use.

****End Of MSDS****