SOLUS ONE E.COLI O157 ELISA ASSAY (EC1-0096 & EC1-0480)

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 6/2/2020 Version: 2.0

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

1.1. Product identifier

Product form : Mixture

Product name : SOLUS ONE E.COLI O157 ELISA ASSAY (EC1-0096 & EC1-0480)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Laboratory use,Industrial use,Professional use

Industrial/Professional use spec : For professional use only

Use of the substance/mixture : For analytical purposes
Scientific research and development
Not for human consumption or veterinary purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

Solus Scientific Solutions
Unit 9, Mansfield Network Centre
Millenium Business Park, Concorde Way
NG19 7JZ Mansfield
T +44 (0) 1623 429701
solus.info@perkinelmer.com

1.4. Emergency telephone number

Emergency number : +44 (0) 1623 429701

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Not classified.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Kit contains several component parts. These parts are manufactured using various products not classified as hazardous according to EC regulations, 1272/2008, EC Directives 67548/EEC, 1999/45/EC and OSHA Hazard communication standard 29CFR 1910-120

Where a component part uses products that are classified as hazardous according to EC regulations, 1272/2008 EC Directives 67548/45/EC and OSHA Hazard communications standard 29CFR 1910-120, they are listed below:

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tris(hydroxymethyl)aminomethane	(CAS-No.) 77-86-1	<= 5	Eye Irrit. 2, H319 STOT SE 3, H335
2M Hydrochloric acid	(CAS-No.) 7647-01-0	<= 5	Met. Corr. 1, H290 Skin Corr. 1, H314 STOT SE 3, H335
Bovine Serum Albumin	(CAS-No.) 9048-46-8 (EC-No.) 232-936-2	<= 5	STOT SE 3, H335

Hydrochloric acid 37%	(CAS-No.) 7647-01-0	<= 3	Met. Corr. 1, H290 Skin Corr. 1, H314 STOT SE 3, H335
Antifoam solution		<= 1	Eye Irrit. 2, H319
5-Chloro-2-methyl-4-isothiazolin-one and 2-methyl-2H isothiazol-3-one solution in glycols (3:1)		<= 0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1, H314 Skin Irrit. 2, H315
Sulfuric acid	(CAS-No.) 7664-93-9 (EC-No.) 231-639-5 (EC Index-No.) 016-020-00-8	< 0.05	Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Corr. 1A, H314
Conjugate reagent component of kit contains <0.01% of E.coli 0157 antibody conjugated to Horse Radish Peroxidase		<0.01	Acute Tox. 4 (Oral), H302

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sulfuric acid	(CAS-No.) 7664-93-9 (EC-No.) 231-639-5 (EC Index-No.) 016-020-00-8	(5 =<C < 15) Skin Irrit. 2, H315 (5 =<C < 15) Eye Irrit. 2, H319 (C >= 15) Skin Corr. 1A, H314

Comments : At the level of concentrations shown above the substances are not classified as hazardous according to EC Regulations, 1272/200/, EC Directives 67548/EEC,1999/45/EC and OSHA Hazard communication standard 29CFR 1910-1200 TMB substrate; (3,3'-Tetramethylbezidine dihydrochloride with,0.5% (N-methylpyrrolidone; Cas; 872-50-4; H360D; H319) AL Tox a/s has concluded the mixture is not classified according to EC(67/548 or 1999/45) and CLP 1272/2008

0.005% of Nigrosin dye added to control; cas 8005-03-6

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If possible show this sheet, if not available show packaging or label. Never give anything by mouth to an unconscious person. Do not leave affected person unattended.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. If breathing difficulties persist : Get medical advice/attention.

First-aid measures after skin contact : After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Do not remove clothing if it sticks to the skin. If irritation persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after inhalation : Vapour/ mist from product, if present, may cause irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : Vapour may cause irritation to skin after excessive exposure.

Symptoms/effects after eye contact : May cause eye irritation. redness, itching, tears.

Symptoms/effects after ingestion : May cause irritation to the digestive tract. Abdominal pain, nausea.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes.

5.3. Advice for firefighters

Precautionary measures fire : Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Warn all persons of toxic hazard.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk. Do not breathe gas, fumes, vapour or spray. No flames, no sparks. Eliminate all sources of ignition.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Do not touch or walk on the spilled product. Avoid contact with skin, eyes and clothing.

Measures in case of dust release : Shelter from vapours by keeping upwind. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc).

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Use self-contained breathing apparatus and chemically protective clothing.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain the spilled material by bunding.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Try to stop release if without risk.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid formation of vapours. Provide local exhaust or general room ventilation.

Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ensure adequate ventilation, especially in confined areas.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, Direct sunlight. Keep container closed when not in use.

Incompatible products : Strong oxidizing agents.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage temperature : 2 - 8 °C

Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Storage area : Store in a dry place. Store in a closed container.

7.3. Specific end use(s)

For analytical purposes. Scientific research and development. Not for human consumption. PC21 Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SOLUS ONE E.COLI O157 ELISA ASSAY		
United Kingdom	1-methyl-2-pyrrolidone (Long Term Exposure Limit): 40 mg.m-3	
Sulfuric acid (7664-93-9)		
United Kingdom	Local name	Sulphuric acid
United Kingdom	WEL TWA (mg/m³)	0.05 mg/m³ mist
United Kingdom	Remark (WEL)	The mist is defined as the thoracic fraction
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

8.2. Exposure controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety procedures. Floors should be impervious, resistant to liquids and easy to clean.

Personal protective equipment:

Avoid all unnecessary exposure.

Materials for protective clothing:					
Wear suitable protective clothing, gloves and eye/face protection					
Hand protection:					
The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.11		EN 374
Eye protection:					
Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against liquid splashes.					
Type	**Use**	**Characteristics**	**Standard**		
Safety glasses	Fine dust, Dust	With side shields	EN 166		
Skin and body protection:					
Emergency safety showers should be available in the immediate vicinity of any potential exposure. Keep suitable chemically resistant protective clothing readily available for emergency use					
Type		**Standard**			
Long sleeved protective clothing		EN ISO 13982			
Respiratory protection:					
No respiratory protection needed under normal use conditions. [In case of inadequate ventilation] wear respiratory protection.					
Device	**Filter type**	**Condition**	**Standard**		
Dust mask	Type P1	Dust protection	EN 14387		

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: No data available
Colour	: No data available
Odour	: No data available.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

Additional information	: Kit consists of microwell plate(s) and various liquid solutions

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability
Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
Protect from sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials
Strong oxidizers.

10.6. Hazardous decomposition products
No hazardous decomposition products known at room temperature. Thermal decomposition generates :

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Sulfuric acid (7664-93-9)	
LD50 oral rat	2140 mg/kg
LC50 inhalation rat (mg/l)	510 mg/m³ 2hr

Skin corrosion/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified

Additional information : Based on available data, the classification criteria are not met

Respiratory or skin sensitisation : Not classified

Additional information : Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Sulfuric acid (7664-93-9)	
LC50 fish 1	42 mg/l Gambusia affinis (Mosquito fish) 96hr
EC50 Daphnia 1	29 mg/l Daphnia magna (Water flea) 24hr

12.2. Persistence and degradability

SOLUS ONE E.COLI O157 ELISA ASSAY	
Persistence and degradability	No data available.

Bovine Serum Albumin (9048-46-8)	
Persistence and degradability	No data available.

Sulfuric acid (7664-93-9)	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

SOLUS ONE E.COLI O157 ELISA ASSAY	
Bioaccumulative potential	No data available.

Bovine Serum Albumin (9048-46-8)	
Bioaccumulative potential	No data available.

Sulfuric acid (7664-93-9)	
Bioaccumulative potential	No data available.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

SOLUS ONE E.COLI O157 ELISA ASSAY
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
Bovine Serum Albumin (9048-46-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out for the substance or the mixture by the supplier

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : Results of 1-methyl-pyrrolidone, short term sampling (pouring of substrate reagent into reagent containers) were below the Short-Term Exposure Limit (STEL) of 80mg/m-3. The Short-term exposure was performed over a 2-minute period and the analyte was below the limit of analytical detection. •
: Results of 1-methyl-pyrrolidone, long term sampling (60ml of substrate reagent in 3 x 20ml aliquots with air exposure) were below the Long-Term Exposure Limit (STEL) of 40mg/m-3. The Long-term exposure was performed over an 8-hour period and the analyte was below the limit of analytical detection. .
: This SDS has been produced by Molekula Ltd.
: **Legal disclaimer**: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.