

SAFETY DATA SHEET



In accordance with Regulation (EC) No 2020/878
Revision date: 20/09/2022
Version number: 03

1. Identification of the substance or preparation and the company/ undertaking

1.1 Product Identifier

Product Name: MAST ID™ CAMP Identification System

Product Code: CAMP-ID

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

Recommended uses: *In vitro* diagnostic product; Laboratory chemical

Uses advised against: No information available

1.3 Details of supplier of the product and safety data sheet

Manufacturer/supplier: Mast Group Ltd., Mast House,
Derby Road,
Bootle,
Merseyside,
UK.
L20 1EA
Telephone: +44 (0) 151 933 7277
Email: uksales@mastgrp.com
Web: www.mast-group.com

Feldstraße 20
23858 Reinfeld
Germany
Telephone: +49 4533 20 07 34
Email: mast@mast-diagnostica.de
Web: www.mast-group.com

1.4 Emergency Contact information

UK contact: Telephone: +44 (0) 151 933 7277 (8am - 5pm GMT Monday to Friday)

EU contact: Telephone: +49 4533 20 07 34 (7am - 4pm GMT Monday to Friday)

2. Hazards identification

2.1 Classification of the substance or mixture

CLP Classification – Regulation (EC) No. 1272/2008: Ninhydrin Development Reagent requires the following labelling. No other components require labelling.

Physical hazards: Based on available data, there are no physical hazards

Health hazards: Flammable liquids (Category 2), Eye irritation (Category 2), Specific target organ toxicity - single exposure (Category 3), Central nervous system.

Environmental hazards: Based on available data, there are no physical hazards

2.2 Label elements

Pictogram:



Signal word: Danger

Hazard statements: H225 Highly flammable liquid and vapour. H302 Harmful if swallowed.
H315 Causes skin irritation. H318 Causes serious eye damage.
H319 Causes serious eye irritation. H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements: P261 Avoid breathing vapours. P280 Wear protective gloves/ eye protection/ face protection. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

No information available

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3. Composition/information on ingredients

Composition: A multi-component diagnostic kit, containing:

1. Indoxyl Acetate Test (IA)
2. Hippurate Test (HIP)
3. Urease Test (URE)
4. Ninhydrin Developing Reagent

Hazardous ingredients:

1. **Indoxyl Acetate Test (IA)** - indoxyl acetate impregnated into a cotton swab and housed in a capped plastic tube.

Component	CAS-No.	EC-No.	Concentration	CLP Classification – 1272/2008/EC	Classification to – 67/548/EEC
Indoxyl acetate	608-08-2	210-154-2	4%	Acute Toxicity Cat. 4; Skin Irritation Cat.2; Eye Irritation Cat. 2; Specific target organ toxicity - single exposure Cat. 3; H302 - Harmful if swallowed. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.	Xn, harmful; Xi, irritant. R22-harmful if swallowed. R36/37/38 – irritating to eyes, respiratory system and skin.

2. **Hippurate Test (HIP)** – a lyophilised mixture of sodium hippurate with an inert carrier.

Component	CAS-No.	EC-No.	Concentration	CLP Classification – 1272/2008/EC	Classification to – 67/548/EEC
Sodium hippurate	532-94-5	-	>25%	None	None

3. **Urease Test (URE)** – a lyophilised mixture of urea, peptones, sodium chloride and phenol red in a buffered base and with an inert carrier.

Component	CAS-No.	EC-No.	Concentration	CLP Classification – 1272/2008/EC	Classification to – 67/548/EEC
Phenol Red	143-74-8	205-609-7	~0.01%	Skin Irritation Cat.2; Eye Irritation Cat. 2; Specific target organ toxicity - single exposure Cat. 3. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.	Xi, irritant. R36/37/38 – irritating to eyes, respiratory system and skin

4. **Ninhydrin Developing Reagent** – ninhydrin in a butan-1-ol + acetone mixture.

Component	CAS-No.	EC-No.	Concentration	CLP Classification – 1272/2008/EC	Classification to – 67/548/EEC
ninhydrin	485-47-2	207-618-1	3.5%	Acute Toxicity Cat. 4; Skin Irritation Cat.2; Eye Irritation Cat. 2; Specific target organ toxicity - single exposure Cat. 3; H302 - Harmful if swallowed. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.	Xn, harmful; Xi, irritant. R22-harmful if swallowed. R36/37/38 – irritating to eyes, respiratory system and skin.
Butan-1-ol	71-36-3	200-751-6	48.25%	Flammable liquids Cat. 3; Acute toxicity, Oral Cat. 4; Skin irritation Cat. 2; Serious eye damage Cat. 1; Specific target organ toxicity - single exposure Cat. 3, Central nervous system; Specific target organ toxicity - single exposure Cat. 3, Respiratory system, H226 Flammable liquid and vapour. H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness.	Xn, harmful, Xi, irritant. R10 Flammable. R22 Harmful if swallowed. R37/38 Irritating to respiratory system and skin. R41 Risk of serious damage to eyes. R67 Vapours may cause drowsiness and dizziness.
Acetone	67-64-1	200-662-2	48.25%	Flammable liquids Cat. 2; Eye irritation Cat. 2; Specific target organ toxicity - single exposure Cat. 3, Central nervous system. H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. EUH066 Repeated exposure may cause skin dryness or cracking.	F Highly flammable; Xi Irritant. R11 Highly flammable. R36 Irritating to eyes. R66 Repeated exposure may cause skin dryness or cracking. R67 Vapours may cause drowsiness and dizziness.

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4. First-aid measures

4.1 Description of First Aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye contact: Rinse thoroughly with plenty of water for 10 to 15 minutes, also under the eyelids. Obtain medical attention if irritation persists.

Skin Contact: Wash off skin thoroughly with soap and plenty of water. Obtain medical attention if irritation persists.

Ingestion: Rinse mouth out with plenty of water. Obtain medical attention if symptoms occur.

Inhalation: Move person to fresh air. Obtain medical attention immediately if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indicate any immediate medical attention and special treatment needed

No information available.

5. Fire fighting measures

5.1 Extinguishing medium

Suitable extinguishing media: Use water spray, CO₂, foam or dry powder as the extinguisher medium.

Extinguishing media which must not be used for safety reasons: No information available

5.2 Special hazards arising from the substance or mixture

Combustible material. Thermal decomposition may lead to release of irritating gases and vapours.

5.3 Advice for firefighters

Wear suitable self contained breathing apparatus for fire fighting if necessary.

5.4 Additional information

No data available.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Wear appropriate protective equipment. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage in suitable container for disposal. Avoid dust formation.

6.4 Further information

NOTE: ninhydrin stains proteins any amino acids/protein present on the skin, wear protective gloves at all times when handling this reagent.

For all tube components sweep or scoop up and arrange for disposal.

For the Ninhydrin Developing Solution, isolate all sources of ignition and ventilate the area. Wear gloves (and if the spill is large, use a self-contained breathing apparatus) and mop up with absorbent material. Finally swab the area of spillage with copious amounts of water.

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7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation. Always use gloves when handling Ninhydrin reagent.

7.2 Conditions for safe storage, including any incompatibilities

Store at 2°C to 8°C. Keep tightly closed in the container provided. Protect from direct sunlight and moisture.

7.3 Specific end use(s)

This product is for laboratory use only and should only be used by suitably trained laboratory personnel.

8. Exposure controls and personal protection

8.1 Control parameters

Components with workspace control parameters: Contains no substance with occupational exposure limits.

8.2 Exposure controls

Engineering controls: No engineering protection required.

Personal protective measures:

Body protection:	Wear standard microbiology laboratory coat.
Eye/face protection:	Safety glasses with side shields conforming to EN 166.
Skin and hand protection:	Wear appropriate protective clothing e.g. nitrile gloves. NOTE: ninhydrin stains proteins any amino acids/protein present on the skin, wear protective gloves at all times when handling this reagent.
Respiratory protection:	Handle in a well ventilated area.

General hygiene measures: Handle in accordance with good laboratory practice.
Wash hands before breaks and at the end of the working day.

9. Physical and Chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	The HIP and URE reagents are lyophilised. The IA is presented as a dried swab. The Ninhydrin Developing Reagent is liquid, ready to use.
Colour:	HIP – white pellet. IA – white to light purple coloured swab. URE – yellow pellet. Ninhydrin Developing Reagent – pale yellow liquid
Odour:	Hippurate reagent - odourless. Ninhydrin Developing Reagent – solvent smell.
Melting point/freezing point:	Ninhydrin Developing Reagent – butan-1-ol 117°C, acetone 56°C; other components not applicable.
Initial boiling point/range:	Ninhydrin Developing Reagent – butan-1-ol -90°C, acetone -94°C; other components not applicable.
Flammability:	No data available.
Lower and upper explosion limit:	No data available.
Flash point:	Ninhydrin Developing Reagent – butan-1-ol 35°C, acetone -17°C; other components not applicable.
Auto-ignition temperature:	Ninhydrin Developing Reagent – butan-1-ol 343°C, acetone 465°C; other components not applicable.
Decomposition temperature:	No data available.
pH	Not applicable.
Kinetic viscosity:	No data available
Solubility in water/other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
Vapour pressure:	No data available.
Density/Relative density:	No data available.
Relative vapour density:	Ninhydrin Developing Reagent – butan-1-ol 5hPa at 20°C, acetone 233hPa at 20°C; other components.
Decomposition temperature	No data available.
Particle characteristics:	No data available.

9.2 Other information

No data available.

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10. Stability and reactivity

10.1 Reactivity

None known on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Incompatible products; Avoid heat; Avoid dust formation.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

None under normal use conditions.

11. Toxicological information

11.1 Information on toxicological effects

Overall product information: This product does not present an acute toxicity based on known or supplied information.

Acute toxicity: **For ninhydrin:** LD50 Oral - rat - 600 mg/kg. See RTECS: NK5425000.
For acetone: LD50 Oral - Rat - 5,800 mg/kg. See RTECS: AL3150000.
Remarks: Behavioural: Altered sleep time (including change in righting reflex). Behavioural: Tremor. Behavioural: Headache. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. LC50 Inhalation - Rat - 8 h - 50,100 mg/m³. Remarks: Drowsiness, dizziness, unconsciousness. LD50 Dermal - Guinea pig - 7,426 mg/kg
For butan-1-ol: LD50 Oral - Rat - 790 mg/kg. See RTECS: EO1400000.
Remarks: Liver: Fatty liver degeneration. Kidney, Ureter, Bladder: Other changes. Blood: Other changes. LC50 Inhalation - Rat - 4 h - 8000 ppm. LD50 Dermal - Rabbit - 3,400 mg/kg

Skin corrosion/irritation: May cause skin irritation.

Serious eye damage/ eye irritation: May cause eye irritation.

Respiratory or skin sensitisation: No data available.

Germ cell mutagenicity: No data available.

Carcinogenicity: IARC: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: No data available.

Specific target organ toxicity – single exposure: May cause drowsiness or dizziness.
May cause respiratory irritation.

Specific target organ toxicity – repeated exposure: No data available.

Aspiration hazard: No data available.

Potential health effects: Drying, cracking of the skin, Skin irritation.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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11.2 Information on other hazards

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

12.1 Toxicity

For acetone: Toxicity to fish LC50 - *Oncorhynchus mykiss* (rainbow trout) - 5,540 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates. LC50 - *Daphnia magna* (Water flea) - 8,800 mg/l - 48 h
For butan-1-ol: Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 1,840 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates.

12.2 Persistence and degradability

Expected to be biodegradable.

12.3 Bioaccumulative potential

For butan-1-ol: Bioaccumulation *Oncorhynchus mykiss* (rainbow trout) - 24 h - 921 mg/l.
Bioconcentration factor (BCF): 0.38

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects.

No data available.

12.7 Other adverse effects.

No data available.

13. Disposal considerations

Disposal considerations: Dispose of in accordance with local and national regulations.
Dispose of contaminated waste, e.g. used plates, according to local microbiological rules.

14. Transport information

14.1 UN Number

ADR/RID: IMDG: IATA: ADR/RID: 1993 IMDG: 1993 IATA: 1993

14.2 UN proper shipping name

ADR/RID: IMDG: IATA: Flammable liquid n.o.s.

14.3 Transport hazard class(es)

ADR/RID: IMDG: IATA: ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group

ADR/RID: IMDG: IATA: ADR/RID: III IMDG: III IATA: III

14.5 Environmental hazards

ADR/RID: IMDG: IATA: None known.

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14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

No data available

15. Regulatory information

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

No data available.

15.2 Chemical safety assessment

Chemical safety assessment reports are not required for mixtures/IVD products.

16. Other information

Original origination date: 11/02/1999

Reason for change to document: Updated in accordance with Regulation (EC) No 2020/878

The above information is believed to be correct but does not purport to be all inclusive and shall be used as a guide only. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product and is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Mast Group Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. See our website at www.mast.grp.com and/or the reverse side of our invoice for additional terms and conditions of sale.