

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 8.3

Revision Date 14.02.2023

Print Date 15.06.2023

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Hydroxyproline Assay Kit (Perchlorate-Free)

Product Number : MAK357

Brand : Sigma

REACH No. : This product is a mixture. REACH Registration Number see section 3.

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

Identified uses : Laboratory chemicals, Manufacture of substances

**1.3 Details of the supplier of the safety data sheet**

Company : Sigma-Aldrich Pte Ltd  
(Co. Registration No. 199403788W)  
2 Science Park Drive  
#05-01/12 Ascent Building  
SINGAPORE 118222  
SINGAPORE

Telephone : +65 6890 6633  
Fax : +65 6890 6639  
E-mail address : TechnicalService@merckgroup.com

**1.4 Emergency telephone**

Emergency Phone # : 1-800-262-8200

This is a summary SDS for a kit. For the full SDS for each of the components listed in section 16 please visit our website.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Corrosive to Metals (Category 1), H290  
Skin corrosion (Sub-category 1A), H314  
Serious eye damage (Category 1), H318  
Respiratory sensitization (Category 1), H334  
Skin sensitization (Category 1), H317  
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336  
Long-term (chronic) aquatic hazard (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.



## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word	Danger
Hazard statement(s)	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P234	Keep only in original packaging.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### Reduced Labeling (<= 125 ml)

Pictogram



Signal Word	Danger
Hazard statement(s)	
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard	none



Statements

## **2.3 Other hazards** - none

---

### **SECTION 3: Composition/information on ingredients**

Refer to component SDS

---

### **SECTION 4: First aid measures**

Refer to component SDS

---

### **SECTION 5: Firefighting measures**

Refer to component SDS

---

### **SECTION 6: Accidental release measures**

Refer to component SDS

---

### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

##### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

##### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

##### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

##### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. No metal containers.

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.

##### **Storage stability**

Recommended storage temperature  
-20 °C

##### **Storage class**

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

#### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated



---

**SECTION 8: Exposure controls/personal protection**

Refer to component SDS

---

**SECTION 9: Physical and chemical properties**

Refer to component SDS

---

**SECTION 10: Stability and reactivity**

Refer to component SDS

---

**SECTION 11: Toxicological information**

Refer to component SDS

---

**SECTION 12: Ecological information**

Refer to component SDS

---

**SECTION 13: Disposal considerations**

Refer to component SDS

---

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 3316

IMDG: 3316

IATA: 3316

**14.2 UN proper shipping name**

ADR/RID: CHEMICAL KIT

IMDG: CHEMICAL KIT

IATA: Chemical kit

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

Further information : No data available

---

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Sigma- MAK357

Page 4 of 10

The life science business of Merck operates as MilliporeSigma in the US and Canada



This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Refer to component SDS

## 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

---

### SECTION 16: Other information

#### Kit Components:

Oxidation Buffer	Sigma	MAK357A	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336
Chloramine T Concentrate	Sigma	MAK357B	Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1; Aquatic Chronic 3; H314, H334, H412
Developer Solution	Sigma	MAK357C	Met. Corr. 1; Skin Corr. 1A; Eye Dam. 1; STOT SE 3; H290, H314, H336
DMAB Concentrate (in DMSO)	Sigma	MAK357D	Skin Sens. 1; H317
Hydroxyproline Standard (1 mg/ml)	Sigma	MAK357E	



## Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Classification of the mixture

Met. Corr.1	H290
Skin Corr.1A	H314
Eye Dam.1	H318
Resp. Sens.1	H334
Skin Sens.1	H317
STOT SE3	H336
Aquatic Chronic3	H412

### Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

### Further information

Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.


The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.


Copyright 2020 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).



## Kit Components:


Oxidation Buffer					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MAK357A		Danger	Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use non-sparking tools.	

Chloramine T Concentrate					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MAK357B		Danger	Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing	Avoid breathing mist or vapors. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.	






			difficulties if inhaled. Harmful to aquatic life with long lasting effects.	Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
--	--	--	---	---	--

Developer Solution					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MAK357C		Danger	May be corrosive to metals. Causes severe skin burns and eye damage. May cause drowsiness or dizziness.	Keep only in original packaging. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Avoid breathing mist or vapors. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Use only outdoors or	



				in a well-ventilated area. Wear protective gloves/ protective clothing/ eye protection/ face protection.	
--	--	--	--	--	--

#### DMAB Concentrate (in DMSO)

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MAK357D		Warning	May cause an allergic skin reaction.	Avoid breathing mist or vapors. IF ON SKIN: Wash with plenty of water. Contaminated work clothing should not be allowed out of the workplace. If skin irritation or rash occurs: Get medical advice/ attention. Wear protective gloves. Take off contaminated clothing and wash it before reuse.	

#### Hydroxyproline Standard (1 mg/ml)

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MAK357E					Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

