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# Section 1. Product and Company Information

GHS Product Name	: Aloin A
Product Code	: ANQ-2-5
CAS	: [1415-73-2]
Molecular Formula	: C <sub>21</sub> H <sub>22</sub> O <sub>9</sub>
	10S-β-D-glucopyranosyl-1,8-dihydroxy-3-(hydroxymethyl)-9(10H)-anthracenone;
	Barbaloin
Company	: MarkHerb
Address	: Gedung Riset dan Inovasi (ex. PAU Lt. 8), Institut Teknologi Bandung, Jl Ganesha 10,
	Bandung 40132
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Website	: <u>www.markherb.com</u>
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# Section 2. Hazards Identification

2.1 GHS classification				
PHYSICAL HAZARDS	:	No data		
HEALTH HAZARDS	:	Skin irritation- category 2.		
		Causes serious eye irritation- category 2.		
		May cause respiratory irritation.		
ENVIRONMENTAL HAZARDS	:	No data		
2.2 GHS label elements, including precautionary statements				
Pictograms or hazard symbols	:			
Signal word	:	Warning		
Hazard statements	:	H315: Causes skin irritation.		
		H319: Causes serious eye irritation.		
		H335: May cause respiratory irritation.		

Precautionary statements	:	P261: Avoid breathing (dust/fume/gas/mist/vapors/spray).
		P264: Wash (hands) thoroughly after handling.
		P280: Wear (protective gloves/protective clothing/eye protection/face
		protection).

# Section 3. Information on Basic Physical and Chemical Properties

Physical States :	[ ] Gas [ ] Liquid [ X ] Solid
Melting Point :	No data
Boiling Point :	No data
Flash Pt :	No data
Evaporation Rate :	No data
Flammability (solid, gas) :	No data
Explosive Limits :	No data
Vapor Pressure (vs. Air or mmHg) :	No data
Vapor Density (vs. Air = 1) :	No data
Specific Gravity (Water = 1) :	No data
Solubility in Water :	No data
Solubility Notes :	0.25 mg/ml in EtOH; 30 mg/ml in DMSO & DMF
Autoignition Pt :	No data
Percent Volatile :	No data
Partition coefficient :	No data
рН :	No data

### Section 4. First aid measures

Description of first aid measures If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. In case of skin contact Wash off with soap and plenty of water. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2). Indication of any immediate medical attention and special treatment needed No data available

### Section 5. Fire Fighting Measures

#### Suitable extinguishing

Media: Dry chemical, foam, water spray, carbon dioxide.

**Precautions for firefighters:** Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

**Special protective equipment for firefighters:** When extinguishing fire, be sure to wear personal protective equipment.

### Section 6. Accidental Release Measures

#### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

#### **Environmental precautions**

Do not let product enter drains.

#### **General Information:**

Use proper personal protective equipment as indicated in Section 8.

#### Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete.

### Section 7. Handling and Storage

#### Precautions for safe handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

#### Storage:

Store in a well closed container. Protected from air and light, refrigerate or freeze (2-8°C)

#### Specific end uses

Use in a laboratory fume hood where possible. Refer to employer is COSHH risk assessment.

## Section 8. Exposure Controls / Personal Protection

#### Engineering controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels. **Control parameters:** Not set up

Personal protective equipment:

Respiratory protection: Dust respirator. Follow local and national regulations.

Hand protection: Protective gloves.

Eye protection: Wear safety glasses and chemical goggles if splashing is possible.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

# Section 9. Stability and Reactivity

Reactivity		
No data available.		
Chemical Stability		
Stable under normal temperatures and pressures.		
Conditions to Avoid		
No data available.		
Incompatibilities with Other Materials		
Strong oxidising agents.		
Hazardous Decomposition Products		
carbon monoxide, irritating and toxic fumes and gases, carbon dioxide		
Hazardous Polymerization		
Has not been reported.		

### Section 10. Toxicological Information

Acute Toxicity		No data
Skin corrosion/irritation		No data
Serious eye damage/irritation		No data
Germ cell mutagenicity		No data
Carcinogenicity		No data
Reproductive toxicity	:	No data

### Section 11. Ecological Information

Toxicity	:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
Persistence and degradability	:	No data
Bioaccumulative potential	:	No data
Mobility in soil	:	No data
Results of PBT & vPvB assessment	:	No data
Other adverse effects:	:	May be harmful to the aquatic environment

### Section 12. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

### Section 13. Transport Information

Hazards Class
Does not meet the criteria for classification as hazardous for transport.
UN proper shipping name ADR/RID
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods
Transport hazard class(es)
Does not meet the criteria for classification as hazardous for transport.

### Section 14. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture no data Chemical Safety Assessment

no data

# Section 15. Additional Information

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

----End of safety data sheet----