LBSO-RD-SDS-AO-001

SAFETY DATA SHEET

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

a. Product Name : Acridine Orange (AO) Stain

Product Number : F23002

b. Relevant identified uses of the substance or mixture and uses advised against : **Identified uses**
Laboratory chemicals, Manufacture of substances

c. Manufacturer & Supplier : Aligned Genetics, Inc
18 Gosan-ro 148beon-gil,
Gunpo-si,
Gyeonggi-do,
Republic of Korea
Telephone: +82-31-478-4185
Fax: +82-31-360-4277
E-mail: sales@logosbio.com

Emergency telephone number +82 31 478 4185

For research use only. Not intended for human or animal diagnostic or therapeutic use.

SECTION 2: Hazards identification

a. GHS classification

Classification according to Regulation (EC) No 1272/2008
Not hazardous

b. GHS-Labeling

Labeling according to Regulation (EC) No 1272/2008

Hazard pictograms
None

Signal word
Not hazardous

Hazard statements
Not hazardous

Precautionary statements
Not hazardous

c. Other hazard which do not result in classification

None

SECTION 3: Composition/ Information on ingredients

3b. Mixtures

Component:	Acridine Orange
Synonyms:	N,N,N',N'-Tetramethylacridine-3,6-diamine monohydrochloride, compound with zinc dichloride
Formula:	$C_{17}H_{19}N_3$
CAS-No.:	10127-02-3
Weight%:	< 0.002%

SECTION 4: First aid measures

a. In case of eye contact
Flush eyes with water. Consult a physician.

b. In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

c. If inhaled
Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

d. If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

SECTION 5: Firefighting measures

a. Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

b. Specific hazards arising from the chemical
Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas.

c. Special protective actions for fire-fighters
Wear self-contained breathing apparatus and protective suit.

d. Further information
No data available.

SECTION 6: Accidental release measures

a. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. For personal protection see section 8.

b. Environmental precautions
Prevent further leakage of spillage if safe to do so.

c. Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

d. Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storge

a. Precautions for safe handling
Avoid contact with skin and eyes and clothing.

b. Conditions for safe storge
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 – 8℃

c. Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated.

SECTION 8: Exposure controls/ personal protection

a. Control parameters
Components with workplace control parameters.

b. Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

c. Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substances at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

a. Appearance	Form: liquid
b. Odor	No data available
c. Odor Threshold	No data available
d. pH	No data available
e. Melting point/freezing point	No data available

f.	**Initial boiling point and boiling range**	100℃
g.	**Flash point**	No data available
h.	**Evaporation rate**	No data available
i.	**Flammability (solid, gas)**	No data available
j.	**Lower explosion limit**	No data available
k.	**Upper explosion limit**	No data available
l.	**Vapour pressure**	No data available
m.	**Vapour density**	No data available
n.	**Specific Gravity/Relative density**	No data available
o.	**Water Solubility**	Soluble
p.	**Partition coefficient: n-octanol / water**	No data available
q.	**Auto-ignition temperature**	No data available
r.	**Decomposition temperature**	No data available
s.	**Viscosity**	No data available
t.	**Explosive properties**	No data available
u.	**Oxidizing properties**	No data available

Other safety information
No data available

SECTION 10: Stability and reactivity

a. Stability
Stable under recommended storage conditions.

b. Reactivity
No data available**.**

c. Possibility of hazardous reactions
No data available.

d. Conditions to avoid
No data available.

e. Incompatible materials
Strong oxidizing agents

f. Hazardous decomposition products
Other decomposition products – No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

a. Information on likely routes of exposure

Inhalation
May be harmful by inhalation.

Ingestion
May be harmful if swallowed.

Skin
May cause skin irritation in susceptible persons.

Eyes
May cause eye irritation with susceptible persons.

Mutagenic effects
Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making a satisfactory assessment.

b. Delayed and immediate effects and also chronic effect from short and long term exposure

Acute toxicity
No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/eye irritation
No data available.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenicity

IARC	No component of this product 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
No data available.

Specific target organ toxicity – repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
RTECS: Not available.

SECTION 12: Ecological information

a. Toxicity
No data available.

b. Persistence and degradability
No data available.

c. Bioaccumulative potential
No data available.

d. Mobility in soil
No data available.

e. Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

f. Other adverse effects
No data available.

SECTION 13: Disposal considerations

a. **Disposal methods**
Offer surplus and non-recyclable solutions to a licensed disposal company.

b. **Contaminates packaging**
Dispose of as unused product.

SECTION 14: Transport information

UN number	ADR/RID: -	IMDG: -	IATA: -
UN proper shipping name	ADR/RID: -	IMDG: -	IATA: -
Transport hazard class(es)	ADR/RID: -	IMDG: -	IATA: -
Packaging group	ADR/RID: -	IMDG: -	IATA: -
Environmental hazards	ADR/RID: -	IMDG: -	IATA: -
Special precautions for user	No data available		

SECTION 15: Regulatory information

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

a. **Regulation under the Occupational Safety and Health Ac**
No data available.

b. **Chemical safety assessment**
For this product, a chemical safety assessment was not carried out.

SECTION 16: Other information

Further information
Copyright 2020 Aligned Genetics, Inc. The license is 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 applies to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Aligned Genetics, Inc. and its Affiliates shall not be held liable for any damage resulting from handling or contact with the above product. See the reverse side of the invoice or packing slip for additional terms and conditions of sale.

End of Safety Data Sheet