Molecular Probes[™]

Material Safety Data Sheet

invitrogen detection technologies

Revision Date: 22-Mar-2005

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code S33100

Product name SYBR Safe™ DNA gel stain in 0.5X TBE

Company/Undertaking Identification

MOLECULAR PROBES, INC. 29851 Willow Creek Road Eugene, OR 97402 U.S.A. ++1 541 465 8300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous/Non-hazardous Components

Chemical Name	CAS-No	EINECS-No.	Weight %	Classification
water	7732-18-5	231-791-2	> 96.9	-
SYBR Safe dye			< 0.1	-
TRIS Base	77-86-1	201-064-4	< 1	-
boric acid	10043-35-3	233-139-2	< 1	-
ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	200-573-9	< 1	-

3. HAZARDS IDENTIFICATION

The product is classified and labelled in accordance with Directive 1999/45/EC

Classification

Indication of danger

Not hazardous

R -phrase(s)

None

4. FIRST AID MEASURES

Skin contact Wash off immediately with plenty of water

Eye contactRinse thoroughly with plenty of water, also under the eyelids. **Ingestion**Never give anything by mouth to an unconscious person

Inhalation Move to fresh air
Notes to physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical Special protective equipment for Wear self-contained breathing apparatus and protective suit

firefighters

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment Soak up with inert absorbent material Methods for cleaning up

7. HANDLING AND STORAGE

Handling No special handling advice required

Store at room temperature in the original container. Storage

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical Name	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation
water	-	-	-
SYBR Safe dye	-	-	-
TRIS Base	-	-	-
boric acid	-	-	-
ethylenediaminetetraacetic acid, tetrasodium salt	-	-	-

Chemical Name	Austria OEL (MAK)	Belgium (TWA)	Denmark (TWA)	Finland OEL (TWA)
water	-	-	-	-
SYBR Safe dye	-	-	-	-
TRIS Base	-	-	-	-
boric acid	-	-	-	-
ethylenediaminetetraacetic acid,	-	-	-	-
tetrasodium salt				

Chemical Name	France OEL (VME)	Germany OEL (TWA)	Ireland (TWA)	Italy OEL (TWA)
water	-	-	-	-
SYBR Safe dye	-	-	-	-
TRIS Base	-	-	-	-
boric acid	-	-	-	-
ethylenediaminetetraacetic acid,	-	-	-	-
tetrasodium salt				

Chemical Name	Netherlands OEL (MAC)	Spain OEL (TWA)	United Kingdom
water	-	-	-
SYBR Safe dye	-	-	-
TRIS Base	-	-	-
boric acid	-	-	-
ethylenediaminetetraacetic acid, tetrasodium salt	-	-	-

Engineering measures No special precautions required.

Personal protective equipment

Respiratory protection No special protective equipment required.

Hand protection Protective gloves.

Safety glasses with side-shields Eye protection Skin and body protection Lightweight protective clothing

Handle in accordance with good industrial hygiene and safety practice Hygiene measures

Environmental exposure controls No special environmental precautions required

9. PHYSICAL AND CHEMICAL PROPERTIES

General Information

Form Liquid

Important Health Safety and Environmental Information

Boiling point/range °C No data available °F No data available Melting point/range °C No data available °F No data available

°C > 100 °C Flash point °F > 212 °F

Autoignition temperature °C No data available °F No data available

Oxidizing properties Corrosivity, Method USEPA 150.1, Result: Not corrosive

Corrosivity, Method DOT-E 10904, Result: Not corrosive

Water solubility soluble

10. STABILITY AND REACTIVITY

Stability Stable.

Materials to avoid No information available Hazardous decomposition No information available

products

Polymerization Hazardous polymerisation does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
water	No data available	No data available	No data available
SYBR Safe dye	> 5,000 mg/kg Oral LD50 Rat	No data available	No data available
TRIS Base	5900 mg/kg Oral LD50 rat	No data available	No data available
boric acid	3450 mg/kg Oral mouse 2260 mg/kg Oral rat	No data available	No data available
ethylenediaminetetraacetic acid, tetrasodium salt	No data available	No data available	No data available

Principle Routes of Exposure/ Potential Health effects

No information available. **Eves** Skin No information available. Inhalation No information available. Ingestion No information available.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects Mutation Data: Cell transformation, Syrian hamster embryo (SHE) cells, negative;

Forward gene mutation at the thymidine kinase (TK) locus, mouse lymphoma (L5178Y) cells, negative with and without metabolic activation; Chromosomal aberrations, human peripheral blood lymphocytes, negative with and without metabolic activation: Histidine reverse gene mutation, Ames assay, Salmonella typhimurium (TA97a, TA98, TA102, TA1538), positive with metabolic activation; Histidine reverse gene mutation, Ames assay, Salmonella typhimurium (TA97a,

TA98, TA102, TA1538), negative without metabolic activation; Histidine reverse gene mutation, Ames assay, Salmonella typhimurium (TA100, TA1535, TA1537), negative

with and without metabolic activation. .

Reproductive toxicity

No information available. Sensitization No information available.

<u>Target Organ Effects</u> No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity effectsContains no substances known to be hazardous to the environment or not

degradable in waste water treatment plants

Effects on waste water treatment Chemical oxygen demand, 7020 ug/L (USEPA 410.1)

plants

Ammonia as nitrogen, 253 ug/L (USEPA 350.1)
Total organic carbon, 2480 ug/L (USEPA 415.1)
Total phenolics, none detected (USEPA 420.1)

Organochlorine pesticides and PCBs, none detected (USEPA 608M) Semi-volatile organic compounds, none detected (USEPA 625) Volatile organic compounds, none detected (USEPA 624)

Priority Pollutant Metals, none detected (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag,

TI, Zn) (USEPA 200.7/200 series)

Aquatic toxicity Test Method: Fathead minnow CA Title 22 acute screening,

Result: Not hazardous or toxic to aquatic life

MobilityCompletely soluble.BiodegradationNo information available.BioaccumulationDoes not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

EWC waste disposal NoNo information available.

Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

IATA

Proper shipping name

Not classified as dangerous in the meaning of transport regulations

Hazard Class Subsidiary Class Packing group

No information available No information available

No information available

UN-No No information available

15. REGULATORY INFORMATION

Indication of danger

Not hazardous

R -phrase(s)

None

S -phrase(s)

None

International Inventories

Chemical Name	EINECS	ELINCS	PICCS	ENCS
water	Listed	-	Listed	-
SYBR Safe dye	-	-	-	-
TRIS Base	Listed	-	Listed	Listed
boric acid	Listed	-	Listed	Listed
ethylenediaminetetraacetic acid_tetrasodium_salt	Listed	-	Listed	Listed

Chemical Name	TSCA	CHINA	AICS	KECL
water	Listed	Listed	Listed	Listed
SYBR Safe dye	-	-	-	-
TRIS Base	Listed	Listed	Listed	Listed
boric acid	Listed	Listed	Listed	Listed
ethylenediaminetetraacetic acid, tetrasodium salt	Listed	Listed	Listed	Listed

16. OTHER INFORMATION

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End of Safety Data Sheet