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## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830

Seite 1 von 9

The mixture is not classified as hazardous. The available Safety Data Sheet is based on the information requirement according to REACH Article 32, and therefore voluntarily created according to the Annex II of the Regulation (EC) No. 1907/2006 (REACH) in the version of the regulation (EU) 2015/830.

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Name: Midori Green Direct DNA Stain  
Cat. No.: MG05, MG06  
EC Substance name: not available  
CAS Number: not available  
EC Number: not available  
REACH Reference Number: not available

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

Identified uses: Mixture of chemicals for industrial and public laboratory analysis  
**SU3:** industrial use, also refer to abbreviation in section 16..  
Uses advised against: Unknown.

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

Supplier: NIPPON GENETICS EUROPE GmbH  
Binsfelder Straße 77  
D- 52351 Düren, Germany  
Phone.: +49 (0) 2421 / 554960  
Fax: +49 (0) 2421 / 5549611  
E-Mail: [info@nippongenetics.de](mailto:info@nippongenetics.de)  
Internet: [www.nippongenetics.eu](http://www.nippongenetics.eu)  
Information on further details at: Technical Support  
Phone: +49 (0) 2421 / 554960  
Fax: +49 (0) 2421 / 5549611  
E-Mail: [sdb@nippongenetics.de](mailto:sdb@nippongenetics.de)

#### 1.4 Emergency telephone no:

Emergency information: Phone: +49 (0) 2421 / 554960  
Within the business hours: Monday to Friday, 8 a.m. to 5 p.m.

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification according to the Regulation (EC) No. 1272/2008 (CLP);**

Not classified as hazardous.

#### 2.2 Labelling elements

**Labelling according to the Regulation (EC) No. 1272/2008 (CLP);**

Not labelled as hazardous.

**Substance on the label:** obsolete  
**Pictograms:** obsolete  
**Signal word:** obsolete  
**H statements:** obsolete  
P statements: P261 Avoid breathing mist / vapours / spray.  
P280 Wear protective gloves / eye protection.

## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830  
Seite 2 von 9

### 2.3 Other hazards:

On PBT or vPvB properties of the product or its ingredients according to the criteria of REACH Annex XIII no information is available.

Physical-chemical hazardous effects are unknown. On complains and symptoms as well as to harmful effects no data are available.

## 3. Composition / information on ingredients:

3.1 Substances: not relevant

### 3.2 Mixtures:

#### Chemical characterization:

Aqueous solution of inorganic and organic ingredients.

Chemical name	REACH Ref. No.	EC No.	Index No.	CAS No.	Content	Classification
Active ingredients of Midori Green Direct DNA Stain*	not available	not available	not available	not available	<1%	not classified as hazardous
Water	not available	231-791-2	not available	7732-18-5	>98%	not classified as hazardous

\* No obligation for declaration according to the chemical legal regulations.

The wordings of the H statements are listed in section 16.

## 4. First aid measures

### 4.1 Description of the first aid measures:

#### 4.1.1 General information:



If complains persist consult a physician. Remove contaminated cloths and shoes, thoroughly clean before re-use. If complains and symptoms occur seek medical advice.

#### 4.1.2 Inhalation:

Remove the affected person to fresh air, bring to rest position, keep warm. If complains and symptoms occur seek medical advice.

#### 4.1.3 Skin contact:

At contact with the skin immediately wash with much water. If complains and symptoms occur seek medical advice.

#### 4.1.4 Eyes contact:



Thoroughly wash the eyes on spread lids with flowing fresh water for 15 minutes, previously remove contact lenses if possible. Provide ophthalmological treatment.

#### 4.1.5 Ingestion:

Don't induce vomiting. Let rinse the mouth, let spit of the liquid and let drink copious amounts of water. If complains and symptoms occur seek medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed:

Not relevant

### 4.3 Indication of any immediate medical attention and special treatment needed:

Decontamination, symptomatic treatment. No specific antidote known.

First created: 15-07-2013

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Next revision at: 18-08-2018

## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830  
Seite 3 von 9

### 5. Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media:



The product is not combustible, adapt the measures to the environment: water spray, carbon dioxide, extinguishing foam and dry extinguishing agent.

##### Not suitable extinguishing media for safety reasons:

Water jet

#### 5.2 Special hazards arising from the substance or mixture:



In the fire case toxic gases – carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen iodide – may be released.

#### 5.3 Advice for fire fighters:



Use a self-contained breathing apparatus (SCBA) at poor ventilation and in closed rooms. Wear protection cloth.

##### Further information:

Adapt the extinguishing media and fire-fighting measures to the environment.

### 6. Accidental release measures

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

Mind the protection measures (section 8). Avoid the contact with skin, eyes and cloth, wear suitable protection equipment. Ensure adequate ventilation. Avoid aerosol formation.

#### 6.2 Environmental precautions:

Do not allow to enter sewers / surface waters / ground water. Remove fire residues and contaminated aqueous wastes in suitable containers and dispose of them in a controlled manner.

#### 6.3 Methods and material for containment and cleaning up:

Take up with liquid-binding agents, e.g. universal binder, treat material as described in section 13 „Disposal considerations“. Clean contaminated surfaces with water.

#### 6.4 Reference to other sections:

Refer to section 8 – personal protection and section 13 – information on disposal.

### 7. Handling and storage

#### 7.1 Precautions for safe handling:

##### 7.1.1 Information on safe use:

Avoid inhalation of aerosol, contact with eyes, skin and cloth, as well as longer or repeated exposure. Provide sufficient ventilation of the working room (local exhaust ventilation if needful). If workplace exposure limits are exceeded, wear appropriate respiratory protection.

##### 7.1.2 Information on fire and explosion protection:

No special measures needful.

##### 7.1.3 Handling rules:

On workplaces only keep available amounts necessary for work progress. Don't leave receptacles stand open. Avoid spilling, preferable handle with non-breakable receptacles or use suitable protection containers on transportation of breakable receptacles.

## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830  
Seite 4 von 9

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### 7.2 Conditions for safe storage considering incompatibilities:

#### 7.2.1 Technical measures and storage conditions:

Keep opened container tightly closed again and stored upright to prevent leakage. Always keep in containers of the same material as the original. Storage temperature 4 ° C recommended. Keep away from sunlight.

#### 7.2.2 Packing materials:

Packing materials must be tested for durability before use.

#### 7.2.3 Requirements for storage rooms and containers:

Storage in passages, passages, stairs, public areas, roofs, roofs and workrooms is not permitted. Do not use food containers because of the risk of confusion. Label containers clearly and permanently. If possible, keep in the original container, keep container tightly closed.

#### 7.2.4 Information on cumulative storage:

**Storage class:** non-combustible liquids.

Nothing but substances of similar properties should be cumulatively stored. Cumulative storage with substances as follows is prohibited:

- Pharmaceuticals, food and feed, including additives.
- Infectious, radioactive and explosive substances.
- Organic peroxides and very reactive oxidizing substances.

**7.2.5 Further information to the storage conditions:** none

**7.3 Specific end uses:** none

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## 8. Exposure controls / personal protection

### 8.1 Control parameters:

**8.1.1 Occupational exposure limits:** not available

**8.1.2 Biological exposure limits:** not available

**8.1.3 DNEL and PNEC values:** not available

**Reference:** For the assessment of the own risk assessment measures (**RMM**) with the charge-free tool **ECETOC TRAM** or with another method possibly a scaling for the proof of the safe use should be performed. Existing DNEL/PNEC values also may be extrapolated based at the concentrations from section 3. If an exposure scenario should be completely applicable, this shall be documented.

**Remark:** With data given by an extended SDB, this is to be done within one year after receipt of the eSDB.

### 8.2 Exposure controls:

#### 8.2.1 Personal protection:

##### Respiratory protection:



No respiratory protection is necessary when working with the small quantities intended for the product. In case of exceptional operating conditions, working with larger quantities and with the risk of aerosol formation use suitable respiratory protection, e.g. half-masks according to EN 140 with filters according to EN 143-P1. Observe wearing time limit.

##### Hand protection:



At the risk of skin contact with the product, ensure adequate protection by wearing suitable protective gloves, e.g. according to EN 374. Before use, test protective gloves for suitability under the specific working conditions (e.g., mechanical resistance, product compatibility and antistatic properties). Observe the instruction and information on the use, storage, maintenance and replacement of protective gloves. Damaged and worn protective gloves should be replaced immediately.

## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830  
Seite 5 von 9

After glove penetration tests with the product over 48 hours, the latex gloves, which are usually worn in research laboratories, are not penetrated even at five-fold concentration.

### Eye protection:

Eye protection goggles with side protection (EN 166).



### Skin protection

Use clothing usual in the chemical industry. Skin protection agents are not as effective as protective gloves, so they should be preferred as much as possible. If no protective gloves can be worn, apply water-insoluble skin protection preparations to the clean skin before starting work and after every break. Before breaks and at the end of work, skin cleansing with soap and water is required. After cleansing, use a greasy skin care product.



### Body protection:

Special body protection generally not required, normal work clothes adequate.



### General protection and hygiene measure:

Do not eat, drink or smoke during working hours. Keep away from food and drink. Avoid contact with eyes and skin. Remove contaminated and soaked clothing immediately. Wash hands before breaks and after work.



### 8.2.2 Limitation of the environmental exposure:

Avoid leaks and spills.

### 8.2.3 Limitation of the consumer's exposure:

Avoid inhalation of vapors, mists or gases, remove sources of ignition.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### 9.1.1 Appearance:

Physical status: liquid  
Color: orange-red to brown  
Odour: odourless

#### 9.1.2 Fundamental data relevant for security:

Parameter	Wert	Einheit	Methode	Bemerkung
pH vaule at 20°C	4,0	----	EPA 9040C	Safety Test Report
Melting point/range	n.a.	°C	----	
Boiling point/range	ca. 100	°C	----	wässrige Lösung
Flash point	>150	°C	ASTM D-93	Safety Test Report
Self-ignition temperature	n.d.			
Vapor pressure at 25 C°	n.d.	hPa	----	
Density	ca. 1,0	g/cm <sup>3</sup>	----	aqueous solution
Bulk density	n.a.	kg/m <sup>3</sup>	----	----
Water solubility at 20 °C	----	mg/L	----	----
Granulometry	n.a.	µm	----	----
Partition coefficient: n-octanol/water log K <sub>ow</sub>	n.d.	----	----	----
Dynamic viscosity	n.d.	mPa*s	----	----
Explosions limit	untere:	n.d.	Vol.%	----
	obere:	n.d.	Vol.%	----

n.a.: not applicable

n.d.: not determined

### 9.2 Other information:

not relevant

## Midori Green Direct DNA Stain

Safety Data Sheet according to Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830  
Seite 6 von 9

### 10. Stability and Reactivity

#### 10.1 Reactivity:

Not reactive under the intended use and storage conditions.

#### 10.2 Chemical stability:

Chemically stable under the intended use and storage conditions.

#### 10.3 Possibility of hazardous reactions:

Unknown under the intended use and storage conditions.

#### 10.4 Conditions to avoid:

High temperature.

#### 10.5 Incompatible materials:

Strong acids and bases, oxidizing and reducing agents

#### 10.6 Hazardous decomposition products

At high temperature carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen iodide.

### 11. Toxicological information

#### 11.1 Information on toxicological effects:

##### 11.1.1 Toxicocinetics, metabolism and distribution:

No data available.

##### 11.1.2 Acute toxicity:

Parameter	Value	Species / cell culture	Method	Remarks
LD <sub>50</sub> subcutaneous	250 mg/kg	Mouse	unknown	pure ingredient

##### 11.1.3 Corrosive and irritation effects:

No data available.

##### 11.1.4 Sensitizing effects:

No data available.

##### 11.1.5 Subacute and chronic toxicity:

No data available.

##### 11.1.6 Carcinogenicity, mutagenicity and reproduction toxicity:

###### Mutagenicity:

Parameter	Value	Species / cell culture	Method	Remarks
<i>In vitro</i> bacterial back-mutation test	negative	Salmonella typhimurium TA98 / TA1537	OECD 471 / Ames test	with / without S9 activation
<i>In vivo</i> micro nucleus test	negative	Swiss-Webster mouse bone marrow erythrocytes	US-EPA Guidelines	pure ingredient

On the carcinogenicity and reproduction toxicity of the product and its ingredients no data are available.

##### 11.1.7 Experience from practise:

No data available.

##### 11.1.8 General remarks:

When handled appropriate and used as intended, the product does not cause harmful effects according to our experience and current information.



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## Midori Green Direct DNA Stain

Safety Data Sheet according to the Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830

Page 7 of 9

### 12. Ecological information

#### 12.1 Toxicity:

Parameter	Value	Species	Method	Remarks
LC <sub>50</sub> fish 96 h	>750 mg/L	Pimephales promelas	OECD 203	Safety Test Report

#### 12.2 Persistence and degradability:

**Biological degradation:**

No data available.

**Abiotic degradation:**

No data available.

#### 12.3 Bio-accumulation potential:

No data available.

#### 12.4 Mobility in soil:

**Absorption/Desorption:**

No data available.

#### 12.5 Volatility:

No data available.

#### 12.6 Results of the PBT and vPvB assessment:

On PBT or vPvB properties of the product or its ingredients according to the criteria of REACH Annex XIII no information is available.

#### 12.7 Other adverse effects:

Ozone depletion potential and global green-house effects are not known.

#### General remarks:

When handled appropriate and used as intended, the product does not cause adverse effects according to our experience and current information, but should not be discharged into large quantities into an outflow or water body.

### 13. Disposal considerations

#### 13.1 Waste treatment methods:

##### 13.1.1 Product:

The allocation of a waste code number according to the European waste catalog should be done in consultation with the regional waste disposal company. Recommendation:

AVV waste code number:	16 05 09	Other waste containing organic chemicals, e.g. lab chemicals not otherwise specified
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##### 13.1.2 Packaging:

Residues in packages should be removed, preferably by rinsing with water, and after complete emptying in accordance with the regulations for waste disposal. Packaging which is not completely emptied must be disposed of in the form as determined by the regional waste disposal company. Recommendation:

AVV waste code number:	15 01 06	mixed packaging
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### 14. Transport information

14.1 UN number: not relevant

14.2 UN proper shipping name: not relevant

14.3 Transport hazard class(es): not relevant

14.4 Packaging group: not relevant

14.5 Environmental hazards: not relevant

14.6 Special precautions for user: not relevant

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: not relevant

Remarks: This product is not classified as dangerous good according to ADR / RID / ADN / IDMG-Code and ICAO / IATA.

### 15. Regulatory information

First created at: 15-07-2013

Last revision at: 18-08-2017



Printed at: 06-08-2017

Next revision at: 18-08-2018

## Midori Green Direct DNA Stain

Safety Data Sheet according to the Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830

Page 8 of 9

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

#### 15.1.1 EU Regulations:

**Classification and labelling acc. to Regulation (EC) No. 1272/2008 (CLP):**

The product is not subject to classification and labelling. Refer to section 2.

**Authorizations and/or use restrictions:**

not applicable

**Information on Directive 1999/13/EG on VOC emission limitations:**

0% VOC in the product

#### 15.1.2 National regulations (United Kingdom):

**Classification and labelling:**

The product is not due to labelling according to the UK regulations.

**Other U.K. regulations and guidance:**

Health and Safety at Work Act 1974.

The Management of Health and Safety at Work regulations 1992.

L5 Control of substances hazardous to Health. The Control of Substances Hazardous to Health Regulations 2002.

Approved codes of practice and guidance.

Guidance Note EH40 – Occupational Exposure Limits.

BS EN ISO 10882-1:2001 - health and safety in welding and allied processes - sampling of air-borne particles and gases in operator's breathing zone – part 1: sampling of airborne particles.

#### 15.2 Chemical safety assessment:

Chemical safety assessments (CSA) according to the Article 14 Paragraph 1 of the Regulation (EC) No 1907/2006 (REACH) are not available.

### 16. Other information

#### 16.1 Wordings of the H-statements from the sections 2 and 3:

Not available.

#### 16.2 Training advice:

Instruction on hazardous substances is mandatory.

#### 16.3 Abbreviation /Explanation:

SU3: Descriptor for industrial users from ECHA Guide Chemical Safety Information Requirements R.12  
[https://echa.europa.eu/documents/10162/13632/information\\_requirements\\_r12\\_de.pdf](https://echa.europa.eu/documents/10162/13632/information_requirements_r12_de.pdf)

PNEC: Predicted No Effect Concentration

DNEL: Derived No Effect Level

ECETOC-TRAM: Tool free of charge for proving the safe use of registered substances.  
<http://www.ecetoc.org/tra>

#### 16.4 Recommended use restriction:

Not recommended for consumer's use.



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Next revision at: 18-08-2018

## Midori Green Direct DNA Stain

Safety Data Sheet according to the Annex II of the Regulation (EC) No. 1907/2006 (REACH), amended by the Regulation (EU) 2015/830

Page 9 of 9

### 16.5 Further information and contact points for technical information:

Safety data sheet creator:

**Fit4REACH**  
likedealers GmbH

Insterburger Weg 9  
D-47495 Rheinberg  
Hallbergstrasse 10  
D-40239 Düsseldorf

Contact person:

Dr. Wolfgang Pahlmann

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Phone: +49 (0) 170 8206788

Fax: +49 (0) 211 66964872

Mail: [w.pahlmann@fit4reach.eu](mailto:w.pahlmann@fit4reach.eu)

Internet: <http://www.fit4reach.eu>

### 16.6 Data sources of the Safety Data Sheet creation:

Information on registered substances, European Chemicals Agency (ECHA); Internet: <http://echa.europa.eu/de>.

Information System on Hazardous Substances of the German Social Accident Insurance (GESTIS), Internet:

<http://www.hvbg.de/d/bia/gestis/stoffdb/index.html>.

Hazardous Substances Data Bank (HSDB) – U.S. National Library of Medicine, Internet: <http://toxnet.nlm.nih.gov>

Hommel interaktive 4.0 – Handbook of Dangerous Goods, Internet: <http://www.springer.com/dal/home/chemistry>

CRC Handbook of Chemistry and Physics, 88<sup>th</sup> Edition, 2007-2008, Internet: <http://www.hbcpnetbase.com>

Safety Data Sheets of the suppliers.

Midori Green Direct DNA Stain Safety Test Report, NIPPON Genetics EUROPE GmbH.

### 16.7 Amended information and reason for amendment:

Prior version:	Version number	1.1	Date:	14-10-2014
Actual version:	Version number	1.2	Date:	18-08-2017
Kind of amendment:	Complete revision according to the amended Annex II.			
Reason for amendment:	Adaption to the Annex II of the Regulation (EC) No. 1907/2006 (REACH) in the version of the Regulation (EU) 2015/830, and to the Annex I of the Regulation (EC) No. 1272/2008 (CLP).			

### 16.8 Remarks:

This information is only intended to describe the safety requirements of the product and is based on the present state of our knowledge. They do not constitute a guarantee for the characteristics of the product described in the sense of the statutory warranty regulations. Please refer to the respective product data sheets for the delivery properties. If the product mentioned in this Material Safety Data Sheet is blended, mixed or processed with other materials, the data in this Material Safety Data Sheet may not be transferred to the new material, unless otherwise specified.