



# Safety Data Sheet

Complies Regulation (EC) No. 1907/2006 (REACH), Annex II,  
modified according to Regulation (EC) 453/2010 - Europe

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## SemenStain

### 1. Identification of the substance/mixture and of the supplier

**Product name:** SemenStain  
**Article number:** ZR10050/10250  
**Application:** Semen staining, spermogram  
*In vitro diagnostics*  
**Manufacturer:** ANTIGENES GmbH, Römerstraße 20-22, 58332 Schwelm, Germany  
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**E-Mail:** [info@antigenes.de](mailto:info@antigenes.de)  
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### 2. Hazards

#### 2.1 Classification and labeling

Classification according to Regulation (EC) No. 1272/2008. Classification according to Directive 67/548 / EEC or Directive 1999/45 / EC. Labeling according to Regulation (EC) No. 1272/2008. The substance / product is classified and labeled according to the CLP Regulation.

#### Formaldehyde



Toxic



Health Hazard



Corrosive

#### Special risks and safety tips

R23/R24/R25 Toxic by inhalation, in contact with skin and if swallowed.

R34 Causes burns.

R43 May cause sensitization by skin contact.

S1/S2 Keep locked up and out of the reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S51 Use only in well-ventilated areas.

#### Hazard and safety instructions

H301/H311/H331 Toxic if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction

H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).

H350 May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

P201 Obtain special instructions before use.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301/P330/P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303/P361/P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304/P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308/P311 IF exposed or concerned: Call a POISON CENTER/doctor/...

P403/P233 Store in a well-ventilated place. Keep container tightly closed.

**Ethanol****Special risks and safety tips**

R11 Highly flammable.  
 S2 Keep out of the reach of children.  
 S7 Keep container tightly closed.  
 S16 Keep away from sources of ignition — No smoking.

**Hazard and safety instructions**

H225 Highly flammable liquid and vapor  
 P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Bengal red****Special risks and safety tips**

no R- and S-phrases

**Hazard and safety instructions**

no H- and P-phrases

**Pyronin G****Special risks and safety tips**

no R- and S-phrases

**Hazard and safety instructions**

no H- and P-phrases

**Phosphomolybdate****Special risks and safety tips**

no R- and S-phrases

**Hazard and safety instructions**

no H- and P-phrases

**Fastgreen FCF****Special risks and safety tips**

R68 Possible risk of irreversible effects.  
 S36/S37 Wear suitable protective clothing and gloves.

**Hazard and safety instructions**

H341 Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).  
 P281 Use personal protective equipment as required.

**Janus green****Special risks and safety tips**

no R- and S-phrases

**Hazard and safety instructions**

no H- and P-phrases

**2.2 Other hazard statements**

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

**3. Composition/ingredients**

Compounds	Reagents	CAS-Code	Quantity
Solution 1	Formaldehyde	50-00-0	<1 %
	Ethanol	64-17-5	<10 %
	H <sub>2</sub> O	7732-18-5	>89 %
Solution 2	Neutral red	553-24-2	<1 %
	Bengal red		<1 %
	H <sub>2</sub> O	7732-18-5	>98 %
Solution 3	Pyronin G	92-32-0	<1 %
	Orange G	1936-15-8	<1 %
	Phosphomolybdate	51429-74-4	<1 %
	H <sub>2</sub> O	7732-18-5	>97 %
Solution 4	Fastgreen FCF	2353-45-9	<1 %
	Janus green	2869-83-2	<1 %
	H <sub>2</sub> O	7732-18-5	>98 %

**4. First aid measures****4.1 Description of first aid measures**

After inhalation of dusts: supply fresh air; if any symptoms occur seek medical advice.

After skin contact: wash with water.

After eye contact: rinse with open eyelid for 10 minutes under running water and seek medical advice.

After swallowing: rinse mouth and then drink water.

If symptoms persist seek medical advice.

**4.2 The most important acute and delayed symptoms and effects**

Cause irritation, cough, stomach and intestinal disorders

**4.3 Indication of immediate medical attention and special treatment**

Skin contact: rinse out quickly and thoroughly with water. Continue to monitor skin. Consult a doctor if any swelling occurs.

Revenue: immediately spit out and rinse thoroughly with water. If any discomfort is felt, consult a doctor immediately.

Eyes: Rinse immediately with an eyewash. Rinse the eyes thoroughly under running tap water. Keep an eye on the eyesight and look for a doctor during the deterioration.

Inhalation: Immediately breathe fresh air, rest and breathe in and out several times. Call a physician if the deterioration occurs.

**5. Fire fighting measures****5.1 Extinguishing media**

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Unsuitable extinguishing agents: for this substance / mixture no limitations of extinguishing agents are known.

**5.2 Special hazards arising from the substance or mixture**

Product non-combustible.

Ambient fire may liberate hazardous vapors.

In case of fire can be released: Carbon monoxide and carbon.

**5.3 Advice for firefighters**

Protective equipment: Wear self-contained breathing apparatus.

**6 Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Avoid skin and eye contact. Do not breathe dust.

**6.2 Environmental precautions**

Do not flush into sewers or waterways.

**6.3 Methods and material for containment and cleaning up**

Pick up mechanically. Dispose of the captured material properly. Clean the area with gloves and masks with water and dry thoroughly. Air the room. Wash coat and contaminated clothing.

**7 Handling and storage**

Store at room temperature (15-25°C).

**8 Exposure controls/personal protection**

Wear gloves, mask and coat while handling during the execution. Avoid smoking and acting with high heat-generating appliances.

**9 Physical and chemical properties****9.1 Information on basic physical and chemical properties**

	<b>Solution 1</b>	<b>Solution 2</b>	<b>Solution 3</b>	<b>Solution 4</b>
Aggregate state	liquid	liquid	liquid	liquid
Color	colorless	red	yellow	green
Odor	odorless	odorless	odorless	not specified
Melting point	not determined	not determined	not determined	not determined
Boiling point	not determined	not determined	not determined	not determined
Inflammability	not determined	not determined	not determined	not determined
Firing point	not determined	not determined	not determined	not determined
Steam pressure	not determined	not determined	not determined	not determined
Relative density	not determined	not determined	not determined	not determined
Solubility	not determined	not determined	not determined	not determined
Viscosity	not determined	not determined	not determined	not determined
Explosive properties	not determined	not determined	not determined	not determined
Oxidizing properties	not determined	not determined	not determined	not determined
Explosion limits	not determined	not determined	not determined	not determined

**9.2 Other information: none****10 Stability and reactivity**

	<b>Solution 1</b>	<b>Solution 2</b>
<b>Reactivity</b>	the product has not been tested	the product has not been tested
<b>Chemical stability</b>	stable when properly stored and handled	stable when properly stored and handled
<b>Thermal decomposition /</b>	no decomposition if used according to	no decomposition if used according to

<b>conditions to be avoided</b> <b>Possibility of hazardous reactions</b> <b>Conditions to avoid</b>  <b>Incompatible materials</b> <b>Hazardous decomposition products</b>	specifications reactions with strong oxidizing agents  avoid strong heating, no further relevant information available oxidizing agents carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)	specifications reactions with strong oxidizing agents  avoid strong heating, no further relevant information available oxidizing agents carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)
	<b>Solution 3</b>	<b>Solution 4</b>
<b>Reactivity</b> <b>Chemical stability</b> <b>Thermal decomposition / conditions to be avoided</b> <b>Possibility of hazardous reactions</b> <b>Conditions to avoid</b>  <b>Incompatible materials</b> <b>Hazardous decomposition products</b>	the product has not been tested stable when properly stored and handled no decomposition if used according to specifications reactions with strong oxidizing agents  avoid strong heating, no further relevant information available oxidizing agents carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)	the product has not been tested stable when properly stored and handled no decomposition if used according to specifications reactions with strong oxidizing agents  avoid strong heating, no further relevant information available oxidizing agents carbon monoxide and carbon dioxide, nitrous gases, hydrogen chloride (HCl)

## 11 Toxicological information (based on individual ingredients of the solution(s))

### Formaldehyde

#### Dangerous health effects

#### Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:

**Oral LD<sub>50</sub>** 100 mg/kg (rat)

**Dermal LD<sub>50</sub>** 270 mg/kg (rabbit)

**Inhaled LC<sub>50</sub>** 0,578 mg/l (rat) /4 h

**Primary irritation:** On the skin: Risk of skin resorption. Danger of skin sensitization

**On the eye:** teariness caused by fumes

**After inhalation:** no irritant effect

**Sensitization:** possible through skin contact Sensitization possible

**Subacute to chronic toxicity:** Evaluation of formaldehyde by IARC and BfR: Carcinogenic to humans. There is a suspicion of a carcinogenic effect.

**Additional toxicological information:** After swallowing irritation in the mouth, throat, esophagus, gastrointestinal tract.

**Further information:** The product must be handled with the care necessary with chemicals.

### Bengal red

#### Dangerous health effects

#### Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:

Quantitative data on the toxicity of this product are not available.

#### Primary irritation:

**On the skin:** prolonged or repeated contact can cause skin irritation.

**On the eye:** May be irritated by intensive exposure.

**After inhalation:** in case of massive exposure to dust the respiratory tract can be irritated.

**Sensitization:** No sensitizing effects known.

**Germ cell mutagenicity:** no data available.

**Carcinogenicity:** no data available.

**Reproductive toxicity:** no data available

**Aspiration hazard:** not applicable

**Specific target organ toxicity in one-day exposure:** the substance or mixture is not classified as a target antidepressant, one-off exposure.

**Specific target organ toxicity in the case of repeated exposure:** the substance or mixture is not classified as a target antidepressant, repeated exposure.

**Additional toxicological information:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information available to us.

**Further information:** The product must be handled with the care necessary with chemicals.

**Neutral red****Dangerous health effects****Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:**

Quantitative data on the toxicity of this product are not available.

**Primary irritation:**

**On the skin:** prolonged or repeated contact can cause skin irritation.

**On the eye:** may be irritated by intensive exposure.

**After inhalation:** in case of massive exposure to dust the respiratory tract can be irritated.

**Sensitization:** no sensitizing effects known.

**Germ cell mutagenicity:** no data available.

**Carcinogenicity:** no data available.

**Reproductive toxicity:** no data available.

**Aspiration hazard:** not applicable.

**Specific target organ toxicity in one-day exposure:** the substance or mixture is not classified as a target antidepressant, one-off exposure

**Specific target organ toxicity in the case of repeated exposure:** the substance or mixture is not classified as a target antidepressant, repeated exposure

**Additional toxicological information: for aromatic amines in general:**

Systemic effect: Methaemoglobinaemia with headache, cardiac arrhythmias, drop in blood pressure, shortness of breath and cramps, leading symptom: Cyanose (blue staining of the blood).

**Further information:** The toxicological properties of the product have not yet been fully investigated, dangerous properties cannot be excluded. The product must be handled with the care necessary with chemicals.

**Pyronin G****Dangerous health effects****Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:**

Quantitative data on the toxicity of this product are not available.

No acute poison information is available for this product

Chronic toxicity: the toxicological properties have not been fully investigated.

Complete information can be found in RTECS.

**Orange G****Dangerous health effects****Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:**

Quantitative data on the toxicity of this product are not available.

**Primary irritation**

**On the skin:** no irritation

**On the eye:** may be irritated by intensive exposure

**After inhalation:** in case of massive exposure to dust, eyes and respiratory tract may become irritating

**Sensitization:** no sensitizing effects known

**Specific target organ toxicity in one-day exposure:** the substance or mixture is not classified as a target antidepressant, one-off exposure.

**Specific target organ toxicity in the case of repeated exposure:** the substance or mixture is not classified as a target antidepressant, repeated exposure.

**Additional toxicological information:** When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information available to us.

**Further information:** The product must be handled with the care necessary with chemicals.

**Phosphormolybdate****Dangerous health effects**

**Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:** quantitative data on the toxicity of this product are not available.

**Specific symptoms in animal experiments:** no data available

**Primary irritation:**

**On the skin:** caustic effect on the skin and mucous membranes.

**On the eye:** causes serious eye damage. Danger of blindness!

**After inhalation:** after inhalation of dusts / aerosols: Mucosal irritation, cough, resorption.

**Sensitization:** no sensitizing effects known.

**Specific target organ toxicity in one-day exposure:** the substance or mixture is not classified as a target antidepressant, one-off exposure.

**Specific target organ toxicity in the case of repeated exposure:** the substance or mixture is not classified as a target antidepressant, repeated exposure.

**Additional toxicological information:** after swallowing: burns in mouth, throat, esophagus and gastrointestinal tract.

**Further information:** The product must be handled with the care necessary with chemicals.

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### Janus green

#### Dangerous health effects

**Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:** Quantitative data on the toxicity of this product are not available.

**Primary irritation:**

**On the skin:** repeated or prolonged contact may cause skin irritation.

**On the eye:** may be irritated by intensive exposure.

**After inhalation:** in case of massive exposure to dust, eyes and respiratory tract can become irritable.

**Sensitization:** no sensitizing effects known.

**Specific target organ toxicity for single exposure:** The substance or mixture is not classified as a target antioxidant, one-time exposure.

**Specific target organ toxicity on repeated exposure:** The substance or mixture is not classified as "target toxic", repeated exposure.

**Further information:** The toxicological properties of the product have not yet been fully investigated, dangerous properties cannot be excluded. The product must be handled with the care necessary with chemicals.

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### Fastgreen FCF

#### Dangerous health effects

**Classification-relevant LD<sub>50</sub> / LC<sub>50</sub> values:**

Oral LD<sub>50</sub> > 2000 mg/kg (rat) (RTECS)

**Primary irritation:**

**On the skin:** no data available.

**On the eye:** slight irritation.

**After inhalation:** no data available.

**Sensitization:** no sensitizing effects known.

**Germ cell mutagenicity:** can presumably cause genetic defects.

**Carcinogenicity:** may cause cancer.

**Specific target organ toxicity in the case of single exposure:** the substance or mixture is not classified as a target organotoxic.

**Specific target organ toxicity on repeated exposure:** the substance or mixture repeated exposure is not classified as a target organotoxic.

**Further information:** The toxicological properties of the product have not yet been fully investigated, dangerous properties cannot be excluded. The product must be handled with the care necessary with chemicals.

## 12 Ecological information

Potential damages unknown. Do not empty into drains / groundwater / soil.

## 13 Disposal considerations

Used solutions and solutions that are past life must be disposed of as hazardous waste, it is to follow the local guidelines; do not release to drains, groundwater and/or soil.

## 14 Transport information

Not classified in transport of dangerous goods.

## 15 Regulatory information

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

National regulations: no

Restriction of occupation: no

### 15.2 Chemical safety assessment

A chemical safety assessment has not been carried out

## 16 Other information

All chemicals are potentially dangerous. Therefore they have to be handled only by specially trained personnel with the necessary care. Although certain hazards are described herein, we cannot guarantee that these are the only hazards. This information is based on our present knowledge; however, it offers no assurance of product properties and establishes no contract legal rights. To our experience and the information provided the product does not have any harmful effects when used and handled according to specifications.