

**1. Identification of the substance/preparation and of the company/undertaking***Identification of the product*

Catalogue No.: 105314

Product name: Kubel-Tiemann's litmus solution for microbiology

*Company/undertaking identification*

Company: Merck KGaA \* 64271 Darmstadt \* Germany \* Tel: +49 6151 72-0

Emergency telephone No.: Please contact the regional Merck representation in your country.

**2. Composition/information on ingredients**

Aqueous solution of organic compounds.

*Synonyms*

Tiemann's solution, Litmus solution

*Hazardous ingredients:**Name according to EC Directives:*

<i>CAS-No.</i>	<i>EC No.</i>	<i>EC-Index-No.</i>	<i>Labelling according to EC Directives</i>	<i>Content:</i>
Chloroform				
67-66-3	200-663-8	602-006-00-4	Xn R 22-38-40-48/20/22	≥ 1 - < 5 %

**3. Hazards identification**

Limited evidence of a carcinogenic effect.

**4. First aid measures**

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Remove contaminated clothing.

After eye contact: rinse out with water.

After swallowing: make the victim drink plenty of water, induce vomiting. Call in physician.

**5. Fire-fighting measures**

Suitable extinguishing media:

In adaption to materials stored in the immediate neighbourhood.

Special risks:

Non-combustible.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Other information:

Prevent fire-fighting water from entering surface water or groundwater.

Catalogue No.: 105314  
Product name: Kubel-Tiemann's litmus solution for microbiology

## 6. Accidental release measures

Person-related precautionary measures:

Avoid substance contact. Do not inhale vapours/aerosols. Ensure supply of fresh air in enclosed rooms.

Environmental-protection measures:

Do not allow to enter sewerage system.

Procedures for cleaning / absorption:

Take up with liquid-absorbent material (e.g. Chemizorb®). Forward for disposal. Clean up affected area.

## 7. Handling and storage

*Handling:*

Work under hood. Do not inhale substance. Avoid generation of vapours/aerosols.

*Storage:*

Tightly closed. In a well-ventilated place. At +15°C to +25°C.

## 8. Exposure controls/personal protection

*Specific control parameter*

EC

Name	Chloroform
Value	2 ml/m <sup>3</sup> 10 mg/m <sup>3</sup>
Carcinogenic	C 3:owing possible carcinogenic effects for man

*Personal protective equipment:*

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: required

Industrial hygiene:

Change contaminated clothing. Application of skin- protective barrier cream recommended. Wash hands after working with substance.

## 9. Physical and chemical properties

Form:	liquid
Colour:	dark blue
Odour:	odourless
pH value at	(20 °C) ~ 9.0
Melting point	not available
Boiling point	not available
Ignition temperature	not available

## Merck Safety Data Sheet

According to EC Directive  
91/155/EEC

Catalogue No.: 105314  
Product name: Kubel-Tiemann's litmus solution for microbiology

Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	1.01 g/cm <sup>3</sup>
Solubility in water	(20 °C)	soluble

### 10. Stability and reactivity

#### *Conditions to be avoided*

no information available

#### *Substances to be avoided*

no information available

#### *Hazardous decomposition products*

no information available

### 11. Toxicological information

#### *Acute toxicity*

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

#### *Subacute to chronic toxicity*

Applicable to partial component(s):  
The carcinogenic potential requires further clarification.

#### *Further toxicological information*

Property that must be anticipated on the basis from the components of the preparation:

After inhalation of vapours: coughing, dyspnoea.

After absorption: agitation, spasms, narcosis.

After skin contact: Slight irritations. Danger of skin absorption.

After eye contact: Slight irritations.

After swallowing: nausea, vomiting.

Systemic effects:

After long-term exposure to the chemical: drop in blood pressure, headache, ataxia (impaired locomotor coordination), gastrointestinal complaints, cardiovascular disorders.

Other notes: Cannot be excluded: Damage of: liver, kidneys.

#### *Further data*

Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

### 12. Ecological information

Ecotoxic effects:

Quantitative data on the ecological effect of this product are not available.

Further ecologic data:

Do not allow to enter waters, waste water, or soil!

Catalogue No.: 105314  
Product name: Kubel-Tiemann's litmus solution for microbiology

### 13. Disposal considerations

*Product:*

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste.

*Packaging:*

Disposal in compliance with official regulations. Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

### 14. Transport information

Entire package: not subject to transport regulations.

### 15. Regulatory information

*Labelling according to EC Directives*

Symbol:	Xn	Harmful
R-phrases:	40	Limited evidence of a carcinogenic effect.
S-phrases:	36/37	Wear suitable protective clothing and gloves.
contains:	Chloroform	

### 16. Other information

Classified as hazardous substance after reevaluation.  
Change/addition in the chapter 8. Specific control parameter.  
Change in the chapter on toxicology.

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.

*The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.*