

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/1

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous sulfuric acid solution of inorganic compounds.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist.
After swallowing: immediately make victim drink plenty of water. 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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/1

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/1

9. Physical and chemical properties

Form:	liquid	
Colour:	yellow-orange	
Odour:	odourless	
pH value	(20 °C)	~ 1.5
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/1

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III
Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail: prodsafe@merck.de

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 445/1

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/2

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous sulfuric acid solution of inorganic compounds.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist.
After swallowing: immediately make victim drink plenty of water. 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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/2

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/2

9. Physical and chemical properties

Form:	liquid	
Colour:	yellow-orange	
Odour:	odourless	
pH value	(20 °C)	~ 1.5
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/2

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail: prodsafe@merck.de

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 445/2

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/3

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous sulfuric acid solution of inorganic compounds.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist.
After swallowing: immediately make victim drink plenty of water. 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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/3

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/3

9. Physical and chemical properties

Form:	liquid	
Colour:	yellow-orange	
Odour:	odourless	
pH value	(20 °C)	~ 1.5
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/3

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail: prodsafe@merck.de

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 445/3

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/4

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous sulfuric acid solution of inorganic compounds.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist.
After swallowing: immediately make victim drink plenty of water. 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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/4

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/4

9. Physical and chemical properties

Form:	liquid	
Colour:	yellow-orange	
Odour:	odourless	
pH value	(20 °C)	~ 1.5
Melting point		not available
Boiling point		not available
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
445/4

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail: prodsafe@merck.de

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 445/4

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/1

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous dye solution.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open.
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
Non-combustible.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/1

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form: liquid
Colour: red
Odour: odourless
pH value (20 °C) ~ 6
Melting point not available
Boiling point 100 °C

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/1

Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Due to the low concentration of the components contained in this product, risks are relatively improbable.

Our own experience has provided no indication of any hazardous potential.

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/1

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---
R-phrases: ---
S-phrases: ---

German regulations

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 4
Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail: prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/2

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous dye solution.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open.
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
Non-combustible.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/2

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: not required

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form:	liquid	
Colour:	red	
Odour:	odourless	
pH value	(20 °C)	~ 6
Melting point		not available
Boiling point		100 °C
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 520-525/2

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Due to the low concentration of the components contained in this product, risks are relatively improbable.

Our own experience has provided no indication of any hazardous potential.

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/2

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 4

Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/3

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous dye solution.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open.
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
Non-combustible.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/3

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: not required

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form:	liquid	
Colour:	red	
Odour:	odourless	
pH value	(20 °C)	~ 6
Melting point		not available
Boiling point		100 °C
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 520-525/3

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Due to the low concentration of the components contained in this product, risks are relatively improbable.

Our own experience has provided no indication of any hazardous potential.

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/3

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 4

Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/4

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous dye solution.

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

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 plenty of water with the eyelid held wide open.
After swallowing: make victim drink plenty of water. Consult doctor if feeling unwell.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
Non-combustible.

6. Accidental release measures

Person-related precautionary measures:
Do not inhale vapours/aerosols.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/4

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: not required

Industrial hygiene:

Change contaminated clothing. Wash hands after working with substance.

9. Physical and chemical properties

Form:	liquid	
Colour:	red	
Odour:	odourless	
pH value	(20 °C)	~ 6
Melting point		not available
Boiling point		100 °C
Ignition temperature		not available
Flash point		not available
Explosion limits	lower	not available
	upper	not available
Density	(20 °C)	~ 1.00 g/cm ³
Solubility in Water		not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 520-525/4

10. Stability and reactivity

Conditions to be avoided

no information available

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

Due to the low concentration of the components contained in this product, risks are relatively improbable.

Our own experience has provided no indication of any hazardous potential.

Further data

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:

No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
520-525/4

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

Water pollution class nwg (nonpolluting substance) VwVwS Anh. 4

Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 29.06.2004
Supersedes edition of 28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/1

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
nickel(II) nitrate				
13138-45-9	236-068-5		O; R8 Xn; R22 Xi; R43	≥ 1 - < 5 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

May cause sensitization by skin contact.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.
After swallowing: immediately make victim drink plenty of water. Consult doctor if feeling unwell.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/1

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. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Avoid substance contact. Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Specific control parameter

TRGS 905

Name	Nickelsalts, soluble
Carcinogenic	1 Category C: 1 (known to be carcinogenic to man)
mutagenic	On the basis of the available data, a classification could not be made into categories 1 - 3 in accordance with Annex I of the "Gefahrstoff-Verordnung (GefStoffV)" (Hazardous Substances Regulation).

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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/1

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	liquid
Colour:	green
Odour:	odourless
pH value	(20 °C) ~ 3
Melting point	not available
Boiling point	not available
Ignition temperature	not available
Flash point	not available
Explosion limits	lower not available
	upper not available
Density	(20 °C) ~ 1.01 g/cm ³
Solubility in Water	not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.:	114693
Product name:	PhotoCheck color solution in round cells for photometer testing Spectroquant® 690/1

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

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

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Slight irritations. Risk of skin sensitization.

After eye contact: Slight irritations.

Other notes:

The following applies to nickel compounds in general: astringent effect on mucous membranes. Sensitization with allergic manifestations in predisposed persons. Occasional formation of nickel dermatitis.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

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:

The following applies to nickel salts in general: biological effects: dissolved Ni toxic for aquatic organisms. Fish: *L. idus* LC₅₀: 570 mg/l; lethal concentration for fish 1 mg/l in soft water; in hard water *P. promelas* LD₅₀ 27 mg/l; bacteria: *Ps. putida* toxic from 0.0025 mg/l up; algae: *Sc. quadricauda* toxic from 1.3 mg/l up; *M. aeruginosa* toxic from 0.005 mg/l up; protozoa: *E. sulcatum* toxic from 0.14 mg/l up; *U. parduczi* toxic from 0.042 mg/l up; arthropods: *D. magna* LC₅₀: 11 mg/l (all values referring to dissolved Ni).

The following applies to nitrates in general: may contribute to the eutrophication of water supplies.

Hazard for drinking water. Fish: LC₅₀ > 500 mg/l.

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/1

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xi	Irritant
R-phrases:	43	May cause sensitization by skin contact.
S-phrases:	24-37	Avoid contact with skin. Wear suitable gloves.
contains:	nickel(II) nitrate	

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances
M050 Dealing with harmful substances

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/1

16. Other information

Text of any R phrases referred to under heading 2:

8
22
43 May cause sensitization by skin contact.

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 29.06.2004
Supersedes edition of 28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
nickel(II) nitrate 13138-45-9	236-068-5		O; R8 Xn; R22 Xi; R43	≥ 1 - < 5 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

May cause sensitization by skin contact.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.
After swallowing: immediately make victim drink plenty of water. Consult doctor if feeling unwell.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

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. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Avoid substance contact. Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Specific control parameter

TRGS 905

Name	Nickelsalts, soluble
Carcinogenic	1 Category C: 1 (known to be carcinogenic to man)
mutagenic	On the basis of the available data, a classification could not be made into categories 1 - 3 in accordance with Annex I of the "Gefahrstoff-Verordnung (GefStoffV)" (Hazardous Substances Regulation).

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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	liquid
Colour:	green
Odour:	odourless
pH value	(20 °C) ~ 3
Melting point	not available
Boiling point	not available
Ignition temperature	not available
Flash point	not available
Explosion limits	lower not available
	upper not available
Density	(20 °C) ~ 1.03 g/cm ³
Solubility in Water	not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

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

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Slight irritations. Risk of skin sensitization.

After eye contact: Slight irritations.

Other notes:

The following applies to nickel compounds in general: astringent effect on mucous membranes. Sensitization with allergic manifestations in predisposed persons. Occasional formation of nickel dermatitis.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

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:

The following applies to nickel salts in general: biological effects: dissolved Ni toxic for aquatic organisms. Fish: *L. idus* LC₅₀: 570 mg/l; lethal concentration for fish 1 mg/l in soft water; in hard water *P. promelas* LD₅₀ 27 mg/l; bacteria: *Ps. putida* toxic from 0.0025 mg/l up; algae: *Sc. quadricauda* toxic from 1.3 mg/l up; *M. aeruginosa* toxic from 0.005 mg/l up; protozoa: *E. sulcatum* toxic from 0.14 mg/l up; *U. parduczi* toxic from 0.042 mg/l up; arthropods: *D. magna* LC₅₀: 11 mg/l (all values referring to dissolved Ni).

The following applies to nitrates in general: may contribute to the eutrophication of water supplies.

Hazard for drinking water. Fish: LC₅₀ > 500 mg/l.

No ecological problems are to be expected when the product is handled and used with due care and attention.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xi	Irritant
R-phrases:	43	May cause sensitization by skin contact.
S-phrases:	24-37	Avoid contact with skin. Wear suitable gloves.
contains:	nickel(II) nitrate	

German regulations

Water pollution class 1 (slightly polluting substance) VwVwS Anh. 4

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances
M050 Dealing with harmful substances

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/2

16. Other information

Text of any R phrases referred to under heading 2:

8
22
43 May cause sensitization by skin contact.

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 29.06.2004
Supersedes edition of 28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
nickel(II) nitrate				
13138-45-9	236-068-5		O; R8 Xn; R22 Xi; R43	≥ 5 - < 10 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

May cause sensitization by skin contact.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.
After swallowing: immediately make victim drink plenty of water. Consult doctor if feeling unwell.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

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. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Avoid substance contact. Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Specific control parameter

TRGS 905

Name	Nickelsalts, soluble
Carcinogenic	1 Category C: 1 (known to be carcinogenic to man)
mutagenic	On the basis of the available data, a classification could not be made into categories 1 - 3 in accordance with Annex I of the "Gefahrstoff-Verordnung (GefStoffV)" (Hazardous Substances Regulation).

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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	liquid
Colour:	green
Odour:	odourless
pH value	(20 °C) ~ 3
Melting point	not available
Boiling point	not available
Ignition temperature	not available
Flash point	not available
Explosion limits	lower not available
	upper not available
Density	(20 °C) ~ 1.06 g/cm ³
Solubility in Water	not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

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

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Slight irritations. Risk of skin sensitization.

After eye contact: Slight irritations.

Other notes:

The following applies to nickel compounds in general: astringent effect on mucous membranes. Sensitization with allergic manifestations in predisposed persons. Occasional formation of nickel dermatitis.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

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:

The following applies to nickel salts in general: biological effects: dissolved Ni toxic for aquatic organisms. Fish: *L. idus* LC₅₀: 570 mg/l; lethal concentration for fish 1 mg/l in soft water; in hard water *P. promelas* LD₅₀ 27 mg/l; bacteria: *Ps. putida* toxic from 0.0025 mg/l up; algae: *Sc. quadricauda* toxic from 1.3 mg/l up; *M. aeruginosa* toxic from 0.005 mg/l up; protozoa: *E. sulcatum* toxic from 0.14 mg/l up; *U. parduczi* toxic from 0.042 mg/l up; arthropods: *D. magna* LC₅₀: 11 mg/l (all values referring to dissolved Ni).

The following applies to nitrates in general: may contribute to the eutrophication of water supplies.

Hazard for drinking water. Fish: LC₅₀ > 500 mg/l.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xi	Irritant
R-phrases:	43	May cause sensitization by skin contact.
S-phrases:	24-37	Avoid contact with skin. Wear suitable gloves.
contains:	nickel(II) nitrate	

German regulations

Water pollution class 2 (polluting substance) VwVwS Anh. 4

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances
M050 Dealing with harmful substances

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/3

16. Other information

Text of any R phrases referred to under heading 2:

8
22
43 May cause sensitization by skin contact.

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue: 29.06.2004
Supersedes edition of 28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

Aqueous solution of inorganic compounds.

Hazardous ingredients:

Name according to EC Directives:

CAS-No.	EC No.	EC-Index-No.	Classification	Content:
nickel(II) nitrate				
13138-45-9	236-068-5		O; R8 Xn; R22 Xi; R43	≥ 10 - < 25 %

(Full text of R-Phrases in heading 16)

3. Hazards identification

May cause sensitization by skin contact.

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 plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.
After swallowing: immediately make victim drink plenty of water. Consult doctor if feeling unwell.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

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. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Other information:
Prevent fire-fighting water from entering surface water or groundwater.

6. Accidental release measures

Person-related precautionary measures:
Avoid substance contact. Do not inhale vapours/aerosols.

Environmental-protection measures:
Do not allow to enter sewerage system.

Procedures for cleaning / absorption:
Take up with liquid-absorbent and neutralizing material (e.g. Chemizorb® H⁺, Art. No. 101595). Forward for disposal. Clean up affected area.

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

Specific control parameter

TRGS 905

Name	Nickelsalts, soluble
Carcinogenic	1 Category C: 1 (known to be carcinogenic to man)
mutagenic	On the basis of the available data, a classification could not be made into categories 1 - 3 in accordance with Annex I of the "Gefahrstoff-Verordnung (GefStoffV)" (Hazardous Substances Regulation).

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.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

Respiratory protection: required when vapours/aerosols are generated.

Eye protection: required

Hand protection: In full contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

In splash contact:
Glove material: nitrile rubber
Layer thickness: 0.11 mm
Breakthrough time: > 480 Min.

The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and the resultant standard EN374, for example KCL 740 Dermatril® (full contact), 740 Dermatril® (splash contact).

This recommendation applies only to the product stated in the safety data sheet and supplied by us as well as to the purpose specified by us. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Industrial hygiene:

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

9. Physical and chemical properties

Form:	liquid
Colour:	green
Odour:	odourless
pH value	(20 °C) ~ 3
Melting point	not available
Boiling point	not available
Ignition temperature	not available
Flash point	not available
Explosion limits	lower not available
	upper not available
Density	(20 °C) ~ 1.08 g/cm ³
Solubility in Water	not available

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

no information available

11. Toxicological information

Acute toxicity

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

Further toxicological information

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

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea.

After skin contact: Slight irritations. Risk of skin sensitization.

After eye contact: Slight irritations.

Other notes:

The following applies to nickel compounds in general: astringent effect on mucous membranes. Sensitization with allergic manifestations in predisposed persons. Occasional formation of nickel dermatitis.

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

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:

The following applies to nickel salts in general: biological effects: dissolved Ni toxic for aquatic organisms. Fish: *L. idus* LC₅₀: 570 mg/l; lethal concentration for fish 1 mg/l in soft water; in hard water *P. promelas* LD₅₀ 27 mg/l; bacteria: *Ps. putida* toxic from 0.0025 mg/l up; algae: *Sc. quadricauda* toxic from 1.3 mg/l up; *M. aeruginosa* toxic from 0.005 mg/l up; protozoa: *E. sulcatum* toxic from 0.14 mg/l up; *U. parduczi* toxic from 0.042 mg/l up; arthropods: *D. magna* LC₅₀: 11 mg/l (all values referring to dissolved Ni).

The following applies to nitrates in general: may contribute to the eutrophication of water supplies.

Hazard for drinking water. Fish: LC₅₀ > 500 mg/l.

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

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID
UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code
UN 3316 CHEMICAL KIT, 9, III
Ems F-A S-P

Air CAO, PAX
CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.
THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

15. Regulatory information

Labelling according to EC Directives

Symbol:	Xi	Irritant
R-phrases:	43	May cause sensitization by skin contact.
S-phrases:	24-37	Avoid contact with skin. Wear suitable gloves.
contains:	nickel(II) nitrate	

German regulations

Water pollution class 2 (polluting substance) VwVwS Anh. 4

Storage class VCI 10-13

Data sheet of the Chemical Professional Association M004 Irritant substances/corrosive substances
M050 Dealing with harmful substances

The employment restrictions for young workers in accordance with section 22 of the Youth Employment Protection Law (JArbSchG) are to be observed.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
690/4

16. Other information

Text of any R phrases referred to under heading 2:

8
22
43 May cause sensitization by skin contact.

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.

Safety Data Sheet

According to EC Directive 91/155/EEC

Date of issue:
Supersedes edition of

29.06.2004
28.08.2003

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

Identification of the product

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
Wasser

Use of the substance/preparation

Reagent for analysis

Company/undertaking identification

Company: Merck KGaA * 64271 Darmstadt * Germany * Tel: +49 (0)6151/72-0
Emergency telephone No.: +49 (0)6151/72112 * Fax: +49 (0)6151/72-7780

2. Composition/information on ingredients

CAS-No.:	7732-18-5		
M:	18.02 g/mol	EC-No.:	231-791-2
Formula Hill:	H ₂ O		

3. Hazards identification

No hazardous product as specified in Directive 67/548/EEC.

4. First aid measures

No special precautionary measures necessary.

5. Fire-fighting measures

Suitable extinguishing media:
In adaption to materials stored in the immediate neighbourhood.

Special risks:
none

6. Accidental release measures

Procedures for cleaning / absorption:
Pour into drain.

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
Wasser

7. Handling and storage

Handling:

No further requirements.

Storage:

Tightly closed. At +15°C to +25°C.

The data apply to the entire pack.

8. Exposure controls/personal protection

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: not required

Eye protection: not required

Hand protection: not required

Industrial hygiene:
not required

9. Physical and chemical properties

Form:	liquid		
Colour:	colourless		
Odour:	odourless		
pH value	(20 °C)	neutral	
Viscosity dynamic	(20 °C)	0.952	mPa*s
Melting point		0	°C
Boiling point		100	°C
Ignition temperature		not applicable	
Flash point		not applicable	
Explosion limits	lower	not applicable	
	upper	not applicable	
Vapour pressure	(20 °C)	23	hPa
Density	(20 °C)	1.00	g/cm ³
Solubility in ethanol	(20 °C)	soluble	

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
Wasser

10. Stability and reactivity

Conditions to be avoided

none

Substances to be avoided

The generally known reaction partners of water.

Hazardous decomposition products

none

Further information

none

11. Toxicological information

Acute toxicity

No toxic effects are to be expected when the product is handled appropriately.

12. Ecological information

not required

13. Disposal considerations

Product:

Chemicals must be disposed of in compliance with the respective national regulations. Under www.retrologistik.de you will find country- and substance-specific information as well as contact partners.

Packaging:

Merck product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system. Under www.retrologistik.de you will find special information on the respective national conditions as well as contact partners.

14. Transport information

Road & Rail ADR, RID

UN 3316 CHEMIE-TESTSATZ, 9, III

Inland waterway ADN, ADNR not tested

Sea IMDG-Code

UN 3316 CHEMICAL KIT, 9, III

Ems F-A S-P

Air CAO, PAX

CHEMICAL KIT, 9, UN 3316, III

The transport regulations are cited according to international regulations and in the form applicable in Germany. Possible national deviations in other countries are not considered.

THESE TRANSPORT DATA APPLY TO THE ENTIRE PACK !

Merck Safety Data Sheet

According to EC Directive 91/155/EEC

Catalogue No.: 114693
Product name: PhotoCheck color solution in round cells for photometer testing
Spectroquant®
Wasser

15. Regulatory information

Labelling according to EC Directives

Symbol: ---

R-phrases: ---

S-phrases: ---

German regulations

Storage class VCI 10-13

16. Other information

Reason for alteration

Chapter 14: transport information.

General update.

Contact for information:

HSSE-C/CI * Tel: +49 (0)6151/722775 * Fax: +49 (0)6151/726433 * e-mail:prodsafe@merck.de

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.