BECKMAN COULTER

SAFETY DATA SHEET

Doc. ID: 598190-75 Rev. AG
Revised (year/month/day) 2015/05/28

Section 1 Identification of the Substance/mixture and of the Company/undertaking

1.1 Product Identifier

Product Name Trace-Klean™ Ready to Use Cleaning Solution

Part Number 598190

Series Name DU700

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

Product Use For laboratory use only. See product literature for details.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Beckman Coulter, Inc.
250 S. Kraemer Blvd
Brea, CA 92821, U.S.A.
Tel: 800-854-3633

EC REP Address

Beckman Coulter Eurocenter S.A.
22, rue Juste-Oliver, Case Postale 1044,
CH-1260 Nyon 1, Switzerland.
Telephone +41 (0)22 365 36 11
Monday through Friday, 9:00 am to 7:00pm)

e-mail address SDSNT@beckman.com

1.4 Emergency telephone number

Telephone number (24H) Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001) 703-527-3887

Distributor and Emergency Phone No.

Refer to attached list, Document ID: 472050, for local distributor and emergency phone numbers.

Section 2 Hazards Identification

2.1 Classification of substance or mixture

Product Description Mixture

Colorless; Clear; Liquid; Odorless

Classification according to EC 1272/2008 (CLP/GHS)

Skin Corrosion Category 1
Eye Damage Category 1

Classification according to EC Directives 1999/45/EC and 67/548/EEC

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS

Skin Corrosion Category 1
Eye Damage Category 1

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Section 2 Hazards Identification (Continued)

2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

Hazardous Ingredients

Potassium Hydroxide

Pictogram

Signal Word

DANGER

Hazard Statements

H314 Causes severe skin burns and eye damage.

Precautionary Statements

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

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Rinse skin with water.

P304+P340 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P363 Wash contaminated clothing before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/national regulations

Product label will display most significant precautionary statements.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

Section 3 Composition and Information on Ingredients

3.2 Mixtures

Hazardous Ingredients:		Hazard Classification of Pure Ingredients			
Chemical Name	**% by wt.**	**EU-67/548/EEC**	**EU 1272/2008 CLP/GHS**	**GHS**	
Potassium Hydroxide CAS # 1310-58-3 EINECS # 215-181-3 Index # 019-002-00-8	< 1	C;R22-35	Acute Tox. Oral 4 Eye Dam. 1 Skin Corr. 1A H302; H314; H318	Acute Tox. Oral 4 Aquatic Acute 3 Eye Dam. 1 Skin Corr. 1A H302; H314; H318; H402	

See section 8 for available Occupational exposure limits
See Section 15 for additional regulatory information
See Section 16 for hazard class, hazard statements and risk phrase description

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Section 4 First Aid Measures

4.1 Description of first aid measures

Inhalation — If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.

Eye Contact — If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open and obtain medical attention immediately.

Skin Contact — In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention.

Ingestion — If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage.
See Section 11 Toxicological Information for more detailed health information.

4.3 Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

Section 5 Fire Fighting Measures

Flammable Properties — Nonflammable aqueous solution.

5.1 Extinguishing Media — In case of fire use carbon dioxide (CO_2), dry chemical, water spray or foam.
For large fires use extinguishing media suitable for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Special Fire and Explosion Hazards

No special hazards determined.

Hazardous Combustion Products

No combustion products posing significant hazards are expected from this product (an aqueous solution).

5.3 Advice for fire fighters

Protective Equipment — Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

5.4 Additional information — No further relevant information available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions — Observe general safety guidelines for protection; avoid eye and skin contact.
Wear protective gloves, protective clothing and tightly sealed eye/face protection.

6.2 Environmental Precautions — Contain spill to prevent migration.
Do not allow the undiluted product to enter sewers/surface or ground water.

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Section 6 Accidental Release Measures (Continued)

6.3 Methods and material for containment and cleaning up

Spill and Leak Procedures Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.

6.4 Reference to other sections Refer sections 8 and 13.

Section 7 Handling and Storage

7.1 Precautions for safe handling Avoid inhaling, ingesting, and contact with eyes and skin.

7.2 Conditions for safe storage, including any incompatibilities

Store at 2 to 30°C , as directed on the product label.

To maintain product quality, store according to the instructions in the product labeling.

Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

7.3 Specific end uses No further relevant information available.

Section 8 Exposure Controls and Personal Protection

8.1 Control parameters

Exposure Limits

US OSHA None established

ACGIH

Potassium Hydroxide
CAS # 1310-58-3 — 2 mg/m3 Ceiling

DFG MAK None established

Ireland

Potassium Hydroxide
CAS # 1310-58-3 — 2 mg/m3 STEL

IOELVs None established

NIOSH None established

Japan None established

8.2 Exposure controls

Engineering Controls No special engineering controls are required. Use with good general ventilation.

Eye Protection Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.

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Section 8 Exposure Controls and Personal Protection (Continued)

Skin Protection	Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate government standards.
Respiratory Protection	Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid	**Specific Gravity (Water=1.0)**	≈ 1
Color	Colorless	**Solubility**	
Transparency	Clear	**Water**	Miscible
Odor	Odorless	**Organic**	Not determined
pH	>= 12	**Partition coefficient: n-octanol/water**	Not determined
Freezing Point	Not determined	**Auto-ignition Temp.**	Not applicable
Boiling Point	Not determined	**Decomposition Temperature**	Not determined
Flash Point	Not applicable	**Percent Volatiles**	Not applicable
Evaporation Rate	Not determined	**Vapor Pressure**	Not determined
Flammability (Solid, Gas)	Not applicable	**Viscosity**	Not determined
Flammability Limits	Not applicable	**Explosive Properties**	Not applicable
Vapor Density	Not determined	**Oxidizing Properties**	Not applicable
Odor Threshold	Not applicable		

9.2 Other Information No further relevant information available.

Section 10 Stability and Reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical Stability The product is stable in accordance with recommended storage conditions.

10.3 Possibility of hazardous reactions

No further relevant information available.

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Section 10 Stability and Reactivity (Continued)

10.4 Conditions to Avoid

To maintain product performance keep away from strong acids, strong bases, strong oxidizers.

Avoid exposure to heat and direct sunlight.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous Decomposition Products

No decomposition products posing significant hazards would be expected from this product (an aqueous solution).

Section 11 Toxicological Information

11.1 Information on toxicological effects

Toxicity Data for Hazardous Ingredients

Potassium Hydroxide CAS # 1310-58-3	Oral LD50 Rat 214 mg/kg

Primary Routes of Exposure Eye contact, ingestion, inhalation, and skin contact.

Skin Corrosion/Irritation Causes severe skin burns.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory/skin sensitization No data available.

Carcinogenicity No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation.

Germ cell mutagenicity No data available.

Reproductive Toxicity No data available.

Specific target organ toxicity – single exposure

No data available.

Specific target organ toxicity – repeated exposure

No data available.

Aspiration hazard No data available.

Other Information No further relevant information available.

Section 12 Ecological Information

12.1 Ecotoxicity

Fresh Water Species	No information available.
Microtox	No information available.
Water Flea	No information available.
Fresh Water Algae	No information available.

12.2 Persistence and degradability Not determined for the product.

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Section 12 Ecological Information (Continued)

12.3 Bioaccumulation Not determined for the product.

12.4 Mobility in soil Not determined for the product.

12.5 Results of PBT and vPvB assessment

Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

12.6 Other Adverse Effects This product contains environmentally hazardous substance below the cutoff level. Refer section 3 for ingredient information. Do not allow undiluted product to enter sewer/surface or ground water.

Section 13 Disposal Considerations

13.1 Waste treatment methods

Product Waste Disposal Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

13.2 Additional information Suggested European waste catalogue 18 01 07 - chemicals other than those mentioned in 18 01 06. Dispose in accordance with national, state and local waste regulations.

Section 14 Transport Information

	Shipping Information	IATA	IMDG	US DOT	European ADR	Canadian TDG
14.1	UN/ID Number	1814	1814	1814	1814	PIN - 1814
14.2	Shipping Name	Potassium Hydroxide Solution				
14.3	Hazard Class	8 Corrosives	8 Corrosive substances	8 Corrosive material	8 Corrosive substances	8 Corrosives
	Subsidiary Risk	None	None	None	None	None
	Classification Code	Not applicable	Not applicable	Not applicable	C5	Not applicable
14.4	Packing Group	III	III	III	III	III
	Special Provisions	Not applicable	Not applicable	Not applicable	None	None
	Additional information					
	IATA ERG Code	8L	Not applicable	Not applicable	Not applicable	Not applicable
	EmS	Not applicable	F-A, S-B	Not applicable	Not applicable	Not applicable
	NAERG Code	Not applicable	Not applicable	154	Not applicable	154
14.5	Environmental Hazards					
	Marine Pollutant	Not applicable	No	Not applicable	Not applicable	Not applicable

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Section 14 Transport Information (Continued)

Shipping Information	IATA	IMDG	US DOT	European ADR	Canadian TDG

14.6 Special Precautions for user

Warning: Corrosive substances.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Section 15 Regulatory Information

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

US Federal and State Regulations

SARA 313

Formaldehyde is subject to reporting requirements of Section 313, Title III of SARA. 0.1 % de minimis concentration

Ethylene Oxide is subject to reporting requirements of Section 313, Title III of SARA. 0.1 % de minimis concentration

Diethanolamine is subject to reporting requirements of Section 313, Title III of SARA. 1.0 % de minimis concentration

1,4-Dioxane is subject to reporting requirements of Section 313, Title III of SARA. 0.1 % de minimis concentration

Sulfuric Acid is subject to reporting requirements of Section 313, Title III of SARA. 1.0 % de minimis concentration

CERCLA RG's, 40 CFR 302.4

Formaldehyde is listed.

Ethylene Oxide is listed.

Diethanolamine is listed.

1,4-Dioxane is listed.

Potassium Hydroxide is listed.

Sulfuric Acid is listed.

Richonic Acid B is listed.

California Proposition 65

Formaldehyde has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause cancer.

Ethylene Oxide has been identified by the State of California to cause cancer and reproductive harm. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause cancer and reproductive harm.

Diethanolamine has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.

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Section 15 Regulatory Information (Continued)

WARNING: This product contains a chemical known to the State of California to cause cancer.

1,4-Dioxane has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause cancer.

Sulfur Dioxide has been identified by the State of California to cause reproductive harm. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause reproductive harm.

Sulfuric Acid has been identified by the State of California to cause cancer. The State of California has adopted a regulation which requires a warning be given to individual who may be exposed to chemicals identified by the State to cause cancer or reproductive harm.
WARNING: This product contains a chemical known to the State of California to cause cancer.

Massachusetts MSL

Formaldehyde is listed.
Ethylene Oxide is listed.
Triethanolamine is listed.
Diethanolamine is listed.
1,4-Dioxane is listed.
Potassium Hydroxide is listed.
Sulfur Dioxide is listed.
Sulfuric Acid is listed.
Richonic Acid B is listed.

New Jersey Dept. of Health RTK List

Formaldehyde is listed.
Ethylene Oxide is listed.
Triethanolamine is listed.
Diethanolamine is listed.
1,4-Dioxane is listed.
Potassium Hydroxide is listed.
Sulfur Dioxide is listed.
Sulfuric Acid is listed.
Richonic Acid B is listed.

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Section 15 Regulatory Information (Continued)

Pennsylvania RTK

Formaldehyde is listed.
Ethylene Oxide is listed.
Triethanolamine is listed.
Diethanolamine is listed.
1,4-Dioxane is listed.
Potassium Hydroxide is listed.
Sulfur Dioxide is listed.
Sulfuric Acid is listed.
Richonic Acid B is listed.

EU Regulations

This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.

REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.

No ingredients listed.

According to EC Directives (1999/45/EC and 67/548 EEC)

Not classified as dangerous per EC Directives (1999/45/EC and 67/548 EEC)

Canada

This product is exempt from WHMIS label and SDS requirements.

PIN 1814

Ingredients on Ingredient Disclosure List

Formaldehyde
Ethylene Oxide
Triethanolamine
Diethanolamine
1,4-Dioxane
Potassium Hydroxide
Sulfur Dioxide
Sulfuric Acid
Dodecylbenzenesulphonic acid

Ingredients with unknown toxicological properties

Product is exempt

15.2 Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 3.

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Section 16 Other Information

Beckman Coulter Safety Rating	**Flammability: 0** **Health: 3** **Reactivity with Water: 0** **Contact: 3**	Code 0=None 1=Slight 2=Caution 3=Severe

Revision Changes

Revise product use statement.

Hazard Class, hazard statements and risk phrase description from section 3

C - Corrosive
R22 Harmful if swallowed.
R35 Causes severe burns.
Aquatic Acute 3 - Aquatic Hazard Acute, Category 3
Acute Tox. Oral 4 - Acute Toxicity Oral, Category 4
Eye Dam. 1 - Eye Damage Category 1
Skin Corr. 1A - Skin Corrosion Category 1A
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H402 - Harmful to aquatic life.

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road
CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act
CLP - Classification, Labeling and Packaging
DFGMAK - Republic Germany's maximum exposure limit
GHS - Globally Harmonized System
HCS - Hazard Communication Standard
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
ICAO - International Civil Aviation Organization
IMDG - International Maritime Dangerous Goods
IOELVs - European Unions' Indicative Occupational Exposure Limit Values
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PBT - Persistent bioaccumulative and toxic substances
SARA - Superfund Amendments and Reauthorization Act
TDG - Canadian Transportation Of Dangerous Goods Regulations.
UN GHS - United Nations Globally Harmonized System
US DOT - United States Department of Transportation
WHMIS - Workplace Hazardous Material Information System
vPvB - Very persistent and very bioaccumulative substances

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Section 16 Other Information (Continued)

LD50 - Lethal Dose, 50%

For further information, please contact your local Beckman Coulter, Inc. representative.

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