Thermo SCIENTIFIC

Material Safety Data Sheet

Creation Date 25-Feb-2010 **Revision Date** 25-Feb-2010 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Shandon CytoRich Red Collection Fluid**

Cat No. **B9990800, B9990801, B9990802, B9990803**

Synonyms No information available.

Recommended Use Laboratory chemicals

Company
Richard Allan Scientific
A Subsidiary of Thermo Fisher Scientific
4481 Campus Drive
Kalamazoo, MI 49008
Tel: (800) 522-7270

Emergency Telephone Number
Chemtrec US: (800) 424-9300
Chemtrec EU: (202) 483-7616

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Flammable liquid and vapor. Cancer hazard. Irritating to eyes. May cause an allergic skin reaction. May cause central nervous system effects. May cause skin and respiratory tract irritation.

Appearance Light red **Physical State** Liquid **odor** Characteristic Alcohol-like odor

Target Organs Eyes, Skin, Central nervous system (CNS), Liver, Kidney, Blood

Potential Health Effects

Acute Effects
Principle Routes of Exposure

Eyes Irritating to eyes.
Skin May cause irritation. May be harmful in contact with skin. May produce an allergic reaction.
Inhalation May cause irritation of respiratory tract. May be harmful if inhaled. Inhalation may cause central nervous system effects.
Ingestion May be harmful if swallowed. May cause central nervous system effects. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects May cause cancer. Tumorigenic effects have been reported in experimental animals.. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects. Repeated contact may cause allergic reactions in very susceptible persons.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Gastrointestinal tract. Preexisting eye disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Water	7732-18-5	65-70
Isopropyl alcohol	67-63-0	20-23
Methyl alcohol	67-56-1	<3
Ethylene glycol	107-21-1	6-10
Formaldehyde	50-00-0	1-3
Sodium hydroxide	1310-73-2	<1
Monosodium phosphate	1333-80-8	<1
Sodium chloride	7647-14-5	<1
Sodium acetate	127-09-3	<1
FD&C red No. 40	25956-17-6	<1

4. FIRST AID MEASURES

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion Do not induce vomiting. Obtain medical attention.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point 27.8°C / 82°F

Method No information available.

Autoignition Temperature No information available.

Explosion Limits

Upper No data available

Lower No data available

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available.

Hazardous Combustion Products No information available.

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA	Health 2	Flammability 3	Instability 0	Physical hazards N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Use personal protective equipment. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Use only under a chemical fume hood. Use explosion-proof equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl alcohol	TWA: 200 ppm STEL: 400 ppm	(Vacated) TWA: 980 mg/m^3 (Vacated) TWA: 400 ppm (Vacated) STEL: 1225 mg/m^3 (Vacated) STEL: 500 ppm TWA: 400 ppm TWA: 980 mg/m^3	IDLH: 2000 ppm TWA: 980 mg/m^3 TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m^3

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m³ (Vacated) STEL: 325 mg/m³ (Vacated) STEL: 250 ppm Skin TWA: 200 ppm TWA: 260 mg/m³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m³ STEL: 250 ppm STEL: 325 mg/m³
Ethylene glycol	Ceiling: 100 mg/m³	(Vacated) Ceiling: 125 mg/m³ (Vacated) Ceiling: 50 ppm	
Formaldehyde	Ceiling: 0.3 ppm	(Vacated) TWA: 3 ppm (Vacated) STEL: 10 ppm (Vacated) Ceiling: 5 ppm TWA: 0.75 ppm STEL: 2 ppm	IDLH: 20 ppm TWA: 0.016 ppm Ceiling: 0.1 ppm
Sodium hydroxide	Ceiling: 2 mg/m³	(Vacated) Ceiling: 2 mg/m³ TWA: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Isopropyl alcohol	TWA: 400 ppm TWA: 985 mg/m³ STEL: 500 ppm STEL: 1230 mg/m³	TWA: 400 ppm TWA: 980 mg/m³ STEL: 1225 mg/m³ STEL: 500 ppm	TWA: 200 ppm STEL: 400 ppm
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m³ STEL: 328 mg/m³ STEL: 250 ppm Skin	TWA: 200 ppm TWA: 260 mg/m³ STEL: 250 ppm STEL: 310 mg/m³	TWA: 200 ppm TWA: 260 mg/m³ STEL: 325 mg/m³ STEL: 250 ppm Skin
Ethylene glycol	Ceiling: 50 ppm Ceiling: 127 mg/m³	Peak: 100 mg/m³	CEV: 100 mg/m³
Formaldehyde	Ceiling: 3 mg/m³ Ceiling: 2 ppm	Peak: 3 mg/m³ Peak: 2 ppm	STEL: 1.0 ppm CEV: 1.5 ppm
Sodium hydroxide	Ceiling: 2 mg/m³	Peak: 2 mg/m³	CEV: 2 mg/m³

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Light red
odor	Characteristic Alcohol-like odor
Odor Threshold	No information available.
pH	7.4 - 7.6
Vapor Pressure	No information available.
Vapor Density	No information available.
Viscosity	No information available.
Boiling Point/Range	83°C / 181.4°F
Melting Point/Range	No information available.
Decomposition temperature °C	No information available.
Flash Point	27.8°C / 82°F
Evaporation Rate	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity	No information available.
Solubility	No information available.
log Pow	No data available
Molecular Formula	Solution

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	Incompatible products. Heat, flames and sparks.
Incompatible Materials	Strong oxidizing agents, Strong acids
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO_2), Thermal decomposition can lead to release of irritating gases and vapors
Hazardous Polymerization	Hazardous polymerization does not occur
Hazardous Reactions .	None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	90 mL/kg (Rat)	Not listed	Not listed
Isopropyl alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h
Ethylene glycol	4000 mg/kg (Rat)	9530 µL/kg (Rabbit)	Not listed
Formaldehyde	500 mg/kg (Rat)	Not listed	0.578 mg/L (Rat) 4 h
Sodium hydroxide	Not listed	1350 mg/kg (Rabbit)	Not listed
Sodium chloride	3 g/kg (Rat)	10 g/kg (Rabbit)	42 g/m^3 (Rat) 1 h
Sodium acetate	3530 mg/kg (Rat)	10 g/kg (Rabbit)	30 g/m^3 (Rat) 1 h
FD&C red No. 40	10 g/kg (Rat)	10 g/kg (Rabbit)	Not listed

Irritation Irritating to eyes

Toxicologically Synergistic Products No information available.

Chronic Toxicity

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Mexico

Component	ACGIH	IARC	NTP	OSHA	Mexico
Isopropyl alcohol	Not listed	Group 1	Not listed	Not listed	Not listed
Formaldehyde	A2	Group 1	Reasonably Anticipated	X	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)
IARC: (International Agency for Research on Cancer)
IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

Sensitization May cause sensitization by skin contact

Mutagenic Effects Mutagenic effects have occurred in humans.

Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects Developmental effects have occurred in experimental animals.

Teratogenicity Teratogenic effects have occurred in experimental animals..

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Isopropyl alcohol	EC50 96 h >1000 mg/L EC50 72 h >1000 mg/L EC50 96 h >1000 mg/L	LC50 96 h 9640 mg/L	= 35390 mg/L EC50 Photobacterium phosphoreum 5 min	EC50 48 h 13299 mg/L
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h
Ethylene glycol	EC50 96 h 6500 - 13000 mg/L	Not listed	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	EC50 48 h 46300 mg/L
Formaldehyde	Not listed	Leuciscus idus: LC50 = 15 mg/L 96h	Not listed	EC50 = 20 mg/L 96h EC50 = 2 mg/L 48h
Sodium chloride	Not listed	Pimephals prome: LC50: 7650 mg/L/96H	Not listed	EC50: 1000 mg/L/48H
Sodium acetate	Not listed	Not listed	= 7200 mg/L EC50 Pseudomonas putida 18 h	EC50 48 h 5800 mg/L

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Isopropyl alcohol	0.05
Methyl alcohol	-0.74
Ethylene glycol	-1.93
Formaldehyde	0.35

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-
Formaldehyde - 50-00-0	U122	-

14. TRANSPORT INFORMATION

DOT

UN-No	UN1987
Proper Shipping Name	ALCOHOLS, N.O.S.
Proper technical name	(ISOPROPANOL, METHANOL)
Hazard Class	3
Packing Group	III

TDG

UN-No	UN1987
Proper Shipping Name	ALCOHOLS, N.O.S.
Hazard Class	3
Packing Group	III

IATA

UN-No	UN1987
Proper Shipping Name	ALCOHOLS, N.O.S.
Hazard Class	3
Packing Group	III

IMDG/IMO

UN-No	UN1987
Proper Shipping Name	ALCOHOLS, N.O.S.

14. TRANSPORT INFORMATION

Hazard Class 3
Packing Group III

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	KE-35400 X
Isopropyl alcohol	X	X	-	200-661-7	-		X	X	X	X	KE-29363 X
Methyl alcohol	X	X	-	200-659-6	-		X	X	X	X	KE-23193 X
Ethylene glycol	T	X	-	203-473-3	-		X	X	X	X	KE-13169 X
Formaldehyde	X	X	-	200-001-8	-		X	X	X	X	KE-17074 X
Sodium hydroxide	X	X	-	215-185-5	-		X	X	X	X	KE-31487 X
Sodium chloride	X	X	-	231-598-3	-		X	X	X	X	KE-31387 X
Sodium acetate	X	X	-	204-823-8	-		X	X	X	X	KE-00061 X
FD&C red No. 40	X	X	-	247-368-0	-		X	-	X	X	KE-12348 X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Isopropyl alcohol	67-63-0	20-23	1.0
Methyl alcohol	67-56-1	<3	1.0
Ethylene glycol	107-21-1	6-10	1.0
Formaldehyde	50-00-0	1-3	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Formaldehyde	X	100 lb	-	-
Sodium hydroxide	X	1000 lb	-	-

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-
Ethylene glycol	X		-
Formaldehyde	X		-

OSHA

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Formaldehyde	0.5 ppm Action Level 0.75 ppm TWA 2 ppm STEL	TQ: 1000 lb

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-
Ethylene glycol	5000 lb	-
Formaldehyde	100 lb	100 lb
Sodium hydroxide	1000 lb	-

California Proposition 65

This product contains the following Proposition 65 chemicals:

Component	CAS-No	California Prop. 65	Prop 65 NSRL
Formaldehyde	50-00-0	Carcinogen	40 µg/day

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Isopropyl alcohol	X	X	X	-	X
Methyl alcohol	X	X	X	X	X
Ethylene glycol	X	X	X	X	X
Formaldehyde	X	X	X	X	X
Sodium hydroxide	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

Component	DHS Chemical Facility Anti-Terrorism Standard
Formaldehyde	11250 lb STQ (solution)

Other International Regulations

Mexico - Grade Serious risk, Grade 3

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

B2 Flammable liquid
D2A Very toxic materials
D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Regulatory Affairs Thermo Fisher Scientific Tel: (412) 490-8929
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Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS