



MATERIAL SAFETY DATA SHEET

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Section 1 Company and Product Identification

Product Name	Gastrocult®Developer
Part Number	66115
Product Use	For In Vitro Diagnostic Use. See product literature for details.
Series Name	66000 Series
Manufacturer	Beckman Coulter, Inc. 4300 Harbor Blvd. Fullerton, CA 92835-3100, U.S.A.
EC REP Address	Beckman Coulter Ireland Inc. Mervue Business Park Mervue, Galway, Ireland 353 91 774068
Distributor and Emergency Phone No.	 Refer to attached list, Document ID: 472050 , for local distributor and emergency phone numbers.

Section 2 Hazards Identification

Emergency Overview	<p>Colorless; Clear; Liquid; Alcohol odor Flammable liquid and vapor. CNS depressant. Eye, skin and respiratory tract irritant. Harmful by inhalation, in contact with skin and if swallowed.</p>		
Physical Hazards	Vapors of flammable ingredients are heavier than air and may travel to an ignition source, ignite and flash back.		
Potential Health Effects Summary	<p>May cause eye, skin and respiratory tract irritation and central nervous system depression with headache, dizziness, nausea and unconsciousness.</p> <p>Harmful by inhalation, in contact with skin and if swallowed.</p> <p>See Section 11 Toxicological Information for more detailed health information.</p>		
Potential Environmental Effects	No information available.		
Product Hazard Classifications	Meets Hazardous Criteria for Preparation/Mixture		
	EU: Xn;R10-20/21/22-68/20/21/22	WHMIS: Exempt	US OSHA: Hazardous

Section 3 Composition and Information on Ingredients

Hazardous Ingredients:				Hazard Classification of Pure Ingredients		
Chemical Name	CAS #	EINECS #	% by wt.	EU	WHMIS	US OSHA
Ethanol-methanol mix	8013-52-3	Not available	< 50%	F;R11 Xn;R20/21/22- 68/20/21/22	B2; D2B	Flammable Irritant Toxic
Citric Acid	77-92-9	2010691	<5%	Xi;R 36	E	Corrosive
Hydrogen Peroxide	7722-84-1	2317650	<5%	C;R35-20/22 O;R5-8	C; E	Corrosive Oxidizer
octylphenoxy- poly(ethoxyethanol)	9036-19-5	Not available	<5%	Xi;R36/37/38-41	D2B	Irritant

See Section 15 Regulatory Information for additional information on hazard classifications.

See Section 16 for Risk Phrases and WHMIS Classification Description.

Section 4 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. If pain or irritation occur, obtain medical attention.
Skin Contact	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. If pain or irritation occur, obtain medical attention.
Ingestion	If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

Section 5 Fire Fighting Measures

Flammable Properties	Flammable liquid and vapor.
Extinguishing Media	Dry chemical, carbon dioxide, regular foam or water spray.
Special Fire and Explosion Hazards	Vapors form explosive mixtures with air. Vapors are heavier than air; fire may flash from ignition source back along vapor trail.
Hazardous Combustion Products	Depending upon fire conditions, combustion products may range from irritants and asphyxiants to acutely toxic gases.
Protective Equipment for Firefighters	Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

Section 6 Accidental Release Measures

Personal Precautions	Use good laboratory procedures; avoid eye and skin contact. Avoid inhalation and ingestion.
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Section 6 Accidental Release Measures (Continued)

Spill and Leak Procedures	Absorb spilled material with an appropriate inert, non-flammable absorbent and dispose according to local regulations.
Environmental Precautions	Contain spill to prevent migration.

Section 7 Handling and Storage

Handling Precautions	Use in well ventilated area away from heat or ignition sources. Use good laboratory procedures; avoid eye and skin contact.
Recommended Storage Conditions	To maintain efficacy, store according to the instructions in the product labeling. Keep away from incompatible material (see Section 10).

Section 8 Exposure Controls and Personal Protection

Exposure Limits	
US OSHA:	
Hydrogen Peroxide	1 ppm TWA; 1.4 mg/m ³ TWA
ACGIH:	
Hydrogen Peroxide	1 ppm TWA
DFG MAK:	
Hydrogen Peroxide	0.5 ppm MAK; 0.71 mg/m ³ MAK; 0.5 ppm Peak; 0.71 mg/m ³ Peak
NIOSH	
Hydrogen Peroxide	75 ppm IDLH; 1 ppm TWA; 1.4 mg/m ³ TWA
Japan	None established
Engineering Controls	Use in well ventilated area.
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.
Eye Protection	Safety glasses or chemical goggles should be worn to prevent eye contact.
Skin Protection	Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact.

Section 9 Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Transparency	Clear
Odor	Alcohol odor

Section 9 Physical and Chemical Properties (Continued)

Odor Threshold	Not applicable
pH	5-5.5
Freezing Point	Not available
Boiling Point	< 100°C (212°F)
Flash Point	21°C (69.8°F)
Evaporation Rate	Not available
Flammability (Solid, Gas)	Not applicable
Flammable Limits	Not available
Vapor Pressure	18 mm Hg @19°C
Vapor Density	1.6 (air=1)
Specific Gravity	0.90 @20°C
Solubility	
Water	Miscible
Organic	Not available
Coefficient of Water/Oil Distribution	Not available
Autoignition Temp.	Not available
Decomposition Temperature	Not available
Percent Volatiles	Not available

Section 10 Stability and Reactivity

Stability	Stable under normal temperatures and pressures.
Hazardous Incompatibilities	Halogens Strong acids Strong bases Strong oxidizers
Hazardous Decomposition Products	When stored as labeled, no known hazardous decomposition products are formed during the shelf-life of this product.
Conditions to Avoid	Avoid contact with heat, ignition sources and incompatible materials.

Section 11 Toxicological Information

Toxicity Data for Hazardous Ingredients

Citric Acid	Oral LD50 Rat: 3000 mg/kg
Hydrogen Peroxide	Inhalation LC50 Rat: 2 mg/L/4H; Oral LD50 Rat:801 mg/kg; Dermal LD50 Rat:4060 mg/kg; Dermal LD50 Rabbit:2000 mg/kg
octylphenoxy- poly(ethoxyethanol)	Oral LD50 Rat: 4190 mg/kg

Primary Routes of Exposure

The most likely routes of exposure are skin and eye contact. Inhalation may occur if mists are formed in product use.

Potential Effects of Acute Exposure

May cause irritation or burning of skin and eyes by contact. Inhalation and ingestion of large volumes may cause burning of mucous membrane, respiratory irritation, and central nervous system depression.

Potential Effects of Chronic Exposure

Chronic exposure may result in effects similar to those described for acute exposure. Frequent or long-term contact may dry out the skin resulting in dermatitis.

Symptoms of Overexposure

Symptoms of overexposure may include: throat irritation and coughing; dry, red, cracked skin; red irritated eyes; headache, drowsiness, dizziness, stupor; convulsions and coma.

Carcinogenicity

This product does not contain a reportable concentration ($\geq 0.1\%$) of any ingredient listed as carcinogen by ACGIH, IARC, NTP, OSHA or 67/548/EEC Annex I.

Other Effects

None identified.

Conditions Aggravated by Exposure

Individuals with eye and skin disorders may find these conditions aggravated by exposure to this product.
Individuals with eye, kidney, liver and cardiovascular, nervous and respiratory system disorders may find these conditions aggravated by exposure to this product.

Section 12 Ecological Information

Ecotoxicity

Citric Acid	96 Hr LC50 <i>Lepomis macrochirus</i> : 1516 mg/L [static]
Hydrogen Peroxide	96 Hr LC50 <i>Pimephales promelas</i> : 16.4 mg/L; 96 Hr LC50 <i>Lepomis macrochirus</i> :18-56 mg/L [static]; 96 Hr LC50 <i>Oncorhynchus mykiss</i> :10.0-32.0 mg/L [static]

Biodegradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other Adverse Effects

No information available.

Section 13 Disposal Considerations

Waste Disposal

Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

Section 14 Transport Information

Shipping Information	Shipping Name	Alcohols, n.o.s. (Ethanol methanol solution)
	UN/ID Number	1987
	Packing Group	II
IATA	Hazard Class	3 Flammable Liquids
	Subsidiary Risk	None
	Special Provisions	A3
	IATA ERG Code	3L
IMDG	Hazard Class	3 Flammable liquids
	Subsidiary Risk	None
	Special Provisions	274
	Marine Pollutant	No
US DOT	Hazard Class	3 ORM-D Consumer Commodity
	Subsidiary Risk	None
	Special Provisions	173.150
	NAERG Number	127
European ADR	ADR Classification	3 Flammable Liquids
	Classification Code/	F1
	Subsidiary Risk	None
Canadian TDG	PIN	1987
	TDG Classification	3 Flammable Liquids
	Subsidiary Risk	None
	Special Provisions	None
	NAERG Number	127

Section 15 Regulatory Information

US Federal and State Regulations

SARA 313

Ethylene Oxide is subject to reporting requirements of Section 313, Title III of SARA.
1,4-Dioxane is subject to reporting requirements of Section 313, Title III of SARA.


CERCLA RG's, 40 CFR 302.4

Ethylene Oxide is listed.
1,4-Dioxane is listed.

Section 15 Regulatory Information (Continued)

California Proposition 65	<p>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. Accordingly, Beckman Coulter advises you of the following warning: WARNING: This product contains a chemical known to the State of California to cause cancer and reproductive harm.</p> <p>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. Accordingly, Beckman Coulter advises you of the following warning: WARNING: This product contains a chemical known to the State of California to cause cancer.</p>
Massachusetts MSL	<p>Ethylene Oxide is listed. 1,4-Dioxane is listed. Hydrogen Peroxide is listed.</p>
New Jersey Dept. of Health RTK List	<p>Ethylene Oxide is listed. 1,4-Dioxane is listed. Hydrogen Peroxide is listed.</p>
Pennsylvania RTK	<p>Ethylene Oxide is listed. 1,4-Dioxane is listed. Hydrogen Peroxide is listed.</p>

EU Labeling Classification

Classification	Risk and Safety Phrases
Xn  Harmful	R10 Flammable. R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed. S16 Keep away from sources of ignition - No smoking. S36/37 Wear suitable protective clothing and gloves. S7 Keep container tightly closed.

Canada

This product is exempt from WHMIS label and MSDS requirements.

PIN:	1987
Ingredients on Ingredient Disclosure List:	Ethylene Oxide Citric Acid 1,4-Dioxane Hydrogen Peroxide octylphenoxypoly(ethoxyethanol)
Ingredients with unknown toxicological properties:	Product is exempt

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.

Section 16 Other Information

Beckman Coulter Safety Rating	Flammability (Section V): 2 Health (Section XI): 2 Reactivity with Water (Section X): 2 Contact (Section VIII): 2	Code 0=none 1=slight 2=caution 3=severe
Revision Changes	Reformatted Sections 2, 3, 5, 8, 9, 12, 15, and 16 per ANSI Z400.1-2004 Standard.	
Risk Phrases and WHMIS Classification Description From Section 3	R 36 Irritating to eyes. R11 Highly flammable. R20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R20/22 Harmful by inhalation and if swallowed. R35 Causes severe burns. R36/37/38 Irritating to eyes, respiratory system and skin. R41 Risk of serious damage to eyes. R5 Heating may cause an explosion. R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed. R8 Contact with combustible material may cause fire. B2 - Flammable and Combustible Material: Flammable Liquid C - Oxidizing Material D2B - Poisonous and Infectious Material: Division 2 - Other Toxic Effects: Toxic (Chronic Toxic Effects) E - Corrosive Material D2B - Poisonous and Infectious Material: Division 2 - Other Toxic Effects: Toxic (Skin or Eye Irritation)	
For further information, please contact your local Beckman Coulter representative.		

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