

Material Safety Data Sheet

To comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

FAME CHECK FATTY ACID METHYL ESTER TITRATION KIT

SECTION 1 – COMPANY IDENTIFICATION

Manufacturer: Dexsil Corporation
One Hamden Park Drive
Hamden, CT 06517

Emergency Telephone Number:
USA (800) 424-9300 (CHEMTREC)
INT'L (703) 527-3887

Date Prepared: 02-09-2015

Telephone Number: (203) 288-3509

Date Reviewed: 02-09-2015

Email: info@dexsil.com

Product Description: The FAME Check product line is a field Test Kit for determining Fatty Acid Methyl Esters in fuel oils.

SECTION 2 – HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Plastic screw top vial

Acute Tox. 5;H313	May be harmful in contact with skin. (Not adopted by US OSHA)	Aquatic Chronic 2;H411	Toxic to aquatic life with long lasting effects.
Skin Corr. 1A;H314	Causes severe skin burns and eye damage.		
Eye Dam. 1;H318	Causes serious eye damage.		

Reaction Solvent

No applicable GHS categories.

Extraction Buffer

Acute Tox. 5;H303	May be harmful if swallowed. (Not adopted by US OSHA)	Eye Dam. 1;H318	Causes serious eye damage.
Acute Tox. 4;H332	Harmful if inhaled.	STOT SE 3;H335	May cause respiratory irritation.
Skin Corr. 1A;H314	Causes severe skin burns and eye damage.		

Extraction Solvent

Skin Irrit. 2;H315	Causes skin irritation.	Aquatic Chronic 1;H410	Very toxic to aquatic life with long lasting effects.
STOT SE 3;H336	May cause drowsiness or dizziness.		

Titration Syringe

No applicable GHS categories.

Indicator Solvent

No applicable GHS categories.

For additional information on toxicity, please refer to Section 11.

2.2. Label elements

Plastic screw top vial



Danger

H313 May be harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

P260 Do not breathe mist / vapors / spray.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously 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.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

[Storage]:

P405 Store locked up.

[Disposal]:

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

Reaction Solvent

No applicable GHS categories.

Extraction Buffer



Danger

H303 May be harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.

[Prevention]:

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P305+351+338 IF IN EYES: Rinse continuously 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.

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]:

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

Extraction Solvent

Warning

H315 Causes skin irritation.

H336 May cause drowsiness and dizziness.

H410 Very toxic to aquatic life with long lasting effects.

[Prevention]:

P261 Avoid breathing dust / fume / gas / mist / vapors / spray.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P304+312 IF INHALED: Call a POISON CENTER or doctor / physician if you feel unwell.

P321 Specific treatment (see information on this label).

P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

[Storage]:

P403+233 Store in a well ventilated place. Keep container tightly closed.

P405 Store locked up.

[Disposal]:

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

Titration Syringe

No applicable GHS categories.

Indicator Solvent

No applicable GHS categories.

For additional information on toxicity, please refer to Section 11.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

The FAME Check Test Kit consists of one test tube containing a 4 ml plastic vial and a 2 ml break-top vial; one plastic test tube secured with a titration burette and cap assembly containing one 30 gauge needle, one white syringe plunger rod, and one wire tool; two separate screw top vials, a break-top ampule, two sampling syringes, and two tissue wipes.

Component	Contents	CAS#	EC#	GHS	
				Classification	% liquid
Plastic screw top vial	Sodium Hydroxide	1310-73-2	215-185-5	Skin Corr. 1A;H314 Acute Tox. 4;H312	3.71%
	in Water	7732-18-5	231-791-2	---	3.71%
Reaction Solvent	Octanol	111-87-5	209-667-4	Flam. Liq. 2;H225	3.69%
	in Ethanol	64-17-5	200-578-6	Not classified	11.08%
Extraction Buffer	Hydrochloric Acid	7647-01-0	231-595-7	Skin Corr. 1B;H314 STOT SE 3;H335	12.71%
	in Water	7732-18-5	231-791-2	---	28.07%
Extraction Solvent	isooctane	540-84-1	208-759-1	Flam. Liq. 2;H225 Asp. Tox. 1;H304 Skin Irrit. 2;H315 STOT SE 3;H336 Aquatic Acute 1;H400 Aquatic Chronic 1;H410	11.13%
Titration Syringe	Sodium Hydroxide	1310-73-2	215-185-5	---	0.02%
	in Water	7732-18-5	231-791-2	---	7.33%
Indicator Solvent	Thymolphthalein	125-20-2	2047-729-7	---	0.01%
	in Ethanol	64-17-5	200-578-6	Flam. Liq. 2;H225	18.54%
					100.00%

SECTION 4 – FIRST AID MEASURES

First Aid: In case of contact with reagents, rinse well with water.

Eye Contact: For all kit components, flush eyes with large amounts of water for 15 minutes. Seek medical attention.

Skin contact: Flush with large amounts of water. Use soap and water to wash away organic components.

Inhalation: In case of inhalation, remove to fresh air.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

SECTION 5 – FIRE AND EXPLOSION HAZARD

Flash Point	Plastic screw top vial	N/A	N/A
	Reaction Solvent	61°F	16°C
	Extraction Buffer	10.4°F	-12°C
	Titration Syringe	N/A	N/A
	Indicator Solvent	61°F	16°C

Flammable Limit Unknown

Extinguishing Media Water, Dry chemical, foam, CO₂

Special Fire Fighting Procedures Wear SCBA. Avoid breathing sodium oxide fumes that will form on combustion.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Protection Chemical safety glasses and rubber gloves

Spills and Leaks

plastic screw top vial – *Sodium Hydroxide Solution*
Absorb completely and flush area with water.

Reaction Solvent – Octanol/Ethanol Ampule
Absorb completely and dispose of as organic waste.

Extraction Buffer – Hydrochloric Acid Solution
Flush area with water and neutralize with alkaline materials

Extraction Solvent – *isooctane*
Absorb completely and dispose as organic waste.

Titration Syringe – Sodium Hydroxide Solution
Absorb completely and flush area with water.

Indicator Solvent – Ethanol Solution
Absorb completely and dispose of as organic waste.

SECTION 7 – HANDLING AND STORAGE

Protective equipment Wear appropriate safety equipment when performing the test on site.

Storage Store test kits in a cool, dry place. Check expiration date prior to performing test.

SECTION 8 — EXPOSURE CONTROLS/ PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls	None required
Personal Protective Equipment(PPE)	
Respiratory protection	None required during normal use.
Ventilation	Perform test only in a well-ventilated area.
Hand Protection	Always wear rubber gloves when performing the FAME Check test.
Eye protection	Wear safety glasses.
General Hygiene Measures	Avoid contact with skin, eyes and clothing. Wash hands after running tests.

SECTION 9 — PHYSICAL/CHEMICAL CHARACTERISTICS

Property	Plastic vial	Reaction Solvent		Extraction Buffer	Extraction solvent	Titration Syringe	Indicator Solvent
	Sodium Hydroxide	Octanol	Ethanol	Hydrochloric Acid	Isooctane	Sodium Hydroxide	Ethanol
Boiling Pt. °C	100	195	78	108.6	98	100	78
Vapor Pressure mm Hg@ 21°C	2.3	0.02	59.3	16	49.3	2.3	59.3
Solubility in Water	miscible	Insoluble	miscible	miscible	insoluble	miscible	miscible
Specific Gravity	1.5	0.82	0.79	1.1	0.69	1	0.79
Percent Volatile	none	N/A	100	N/A	100	none	100
Evaporation Rate Butyl Acetate=1	N/A	N/A	N/A	N/A	<1	N/A	N/A
Appearance	colorless	Colorless	colorless	colorless	colorless	colorless	colorless
Odor	odorless	Sweet	pleasant	irritating	gas like	Odorless	pleasant

N/A = not available

SECTION 10 — REACTIVITY DATA

Chemical Stability All components are stable.

Conditions to Avoid Do not expose broken sodium ampule to moisture. Keep from strong oxidizers.

Hazardous Decomposition Products Sodium will form hydrogen, sodium hydroxide and sodium oxide when moisture is present. Other solutions are stable.

Hazardous Polymerization Will not occur.

SECTION 11 — TOXICOLOGICAL INFORMATION

Toxicity Data

Component	Contents	TLV / (PEL)
Plastic screw top vial	Sodium Hydroxide	2 mg/m ³ /(2 mg/m ³)
Reaction Solvent	Octanol	N/A
	Ethanol	1900 mg/m ³ / (1900 mg/m ³)
Extraction Buffer	Hydrochloric Acid	5 ppm/(5 ppm)
Extraction Solvent	Isooctane	2350 mg/m ³ / (2350 mg/m ³)
Titration Syringe	Sodium Hydroxide	2 mg/m ³ /(2 mg/m ³)
Titration Solvent	Ethanol	1900 mg/m ³ /(1900 mg/m ³)

SECTION 12 — ECOLOGICAL INFORMATION

Ethanol: Ecotoxicity: Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified) Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

SECTION 13 — DISPOSAL CONSIDERATIONS

Sampling Syringe: Dispose of in accordance with all applicable federal, state and local environmental regulations.

Test Tube 1: Contains reacted oil sample and organic liquid. Dispose of as an organic waste in accordance with all applicable federal, state and local environmental regulations.

SECTION 14 — TRANSPORTATION INFORMATION

DOT

Domestic Highway & Rail Transport Only:

Packaging conforms to conditions and limitations specified in 49 CFR 173.4.

IATA

Domestic/International Air:

Kits are shipped as Dangerous Goods Permitted in Excepted Quantities.

SECTION 15 — REGULATORY INFORMATION

SARA Listed: Ethanol is identified on SARA Sec. 313.

TSCA Inventory Items: Ethanol is identified on the TSCA inventory.

CERCLA Listed: Isooctane, hydrochloric acid and Sodium hydroxide are CERCLA listed chemicals.

EINECS: Components of this product are on the European Inventory of Existing Commercial Chemical Substances.

SECTION 16 — OTHER INFORMATION

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H335 May cause respiratory irritation.

H336 May cause drowsiness and dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and danger of these chemicals for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. These chemicals may interact with other substances. Since the potential uses are so varied, Dexsil cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Dexsil warrants that the chemicals meet the specifications set forth on the label.

DEXSIL DISCLAIMS ANY OTHER WARRANTIES; EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, IT'S MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Dexsil will periodically revise this Material Safety Data Sheet. CHEMTREC emergency telephone number is to be used ONLY in the event of CHEMICAL EMERGENCIAS involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to the Customer Service Dept. at 1-203-288-3509.

For additional information, contact Dexsil.

Rev. 1