

# Living up to Life

## Safety Data Sheet

### Sub-X® Xylene Substitute

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY

##### 1.1 Product Identifier

<b>Trade Name</b>	<b>Sub-X® Xylene Substitute</b>
<b>Product #</b>	3803670 3803672
<b>SDS #</b>	116
<b>SDS Date</b>	August 22, 2013

##### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

<b>Product Use:</b>	Clearing deparaffinization
<b>Uses Advised Against:</b>	All other uses.

##### 1.3 Details of the Supplier of the Substance or Mixture

###### Manufacturer/Preparer:

Leica Biosystems Richmond, Inc. 5205 Route 12 Richmond, IL 60071	Leica Biosystems Canada, Inc. 83 Terracon Place Winnipeg, Manitoba R2J 4B3	Leica Biosystems Melbourne Pty. Ltd. 495 Blackburn Road Mount Waverley, Victoria Australia, 3149
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##### 1.4 Emergency Telephone Number

<b>Emergency Spill Information</b>	1-800- 424-9300 (CHEMTREC) +1-703-527-3887 International calls (call collect)
<b>Other Product Information:</b>	1-800-225-8867

#### SECTION 2: HAZARDS IDENTIFICATION

##### 2.1 Classification of the Substance or Mixture

###### CLP/GHS Classification (1272/2008):

<b>Physical:</b>	<b>Health:</b>	<b>Environmental</b>
Flammable Liquid Category 3	Aspiration Toxicity Category 1	Aquatic Chronic Category 4

**EU Classification (67/548/EEC):** Xn, R10, R65, R66

##### 2.2 Label Elements:

DANGER! Contains aliphatic hydrocarbon.



#### Hazard Phrases

H226	Flammable liquid and vapor
H304	May be fatal if swallowed and enters airways.
H413	May cause long lasting harmful effects to aquatic life

#### Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measure against static discharge.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303 + P361 + P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P331	Do NOT induce vomiting.
P370 + P378	In case of fire: use dry chemical, foam or water spray for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of container/contents to approved disposal site in accordance with all local and national regulations.

**2.3 Other Hazards:** EUH 066 Repeated exposures may cause skin dryness or cracking.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)
Aliphatic hydrocarbon	64742-48-9 265-150-3	99	Xn, R10, R65, R66	Flammable Liquid Category 3 (H226), Aspiration Toxicity Category 1 (H304), Aquatic Chronic Category 4 (H413)

See Section 16 for full text of GHS and EU Classifications.

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of First Aid Measures

##### First Aid

**Eye contact:** Flush eye with water for at while lifting the upper and lower lids. Get medical attention if irritation persists.

**Skin contact:** Wash exposed skin with soap and water. Get medical attention if irritation develops. Remove contaminated clothing and laundry before reuse.

**Inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms persists.

**Ingestion:** If swallowed, rinse out mouth with water. Aspiration hazard. DO NOT induce vomiting. If vomiting occurs, keep head below hips to prevent aspiration into the lungs. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention.

See Section 11 for more detailed information on health effects.

**4.2 Most Important symptoms and effects, both acute and delayed:** May cause mild eye, skin and respiratory irritation. Acute exposure to high concentrations can result in CNS effects of headaches, dizziness, drowsiness, or unconsciousness. Prolonged exposures may cause defatting of the skin.

**4.3 Indication of any immediate medical attention and special treatment needed:** Immediate medical treatment is required for ingestion.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing Media:

Use dry chemical, foam, carbon dioxide (CO<sub>2</sub>), or water fog.

### 5.2 Special Hazards Arising from the Substance or Mixture

**Unusual Fire and Explosion Hazards:** Flammable liquid and vapor. Vapors are heavier than air and will travel along surfaces to remove ignition sources. Vapors will collect in low areas. Vapors may be ignited by static sparks.

**Combustion Products:** Oxides of carbon.

**5.3 Advice for Fire-Fighters:** Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate protective equipment. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Prevent entry into basements or confined areas.

### 6.2 Environmental Precautions:

Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.

### 6.3 Methods and Material for Containment and Cleaning Up:

Stop spill at the source if it is safe to do so. Absorb with an inert material. Use non-sparking tools and equipment. Collect into a suitable container for disposal.

### 6.4 Reference to Other Sections:

Refer to Section 8 for personal protective equipment, and Section 13 for disposal information.

## SECTION 7: HANDLING and STORAGE

### 7.1 Precautions for Safe Handling:

Avoid eye and skin contact. Avoid breathing vapors. Use only with adequate ventilation. Wash thoroughly after

handling. Remove contaminated clothing and launder before re-use. Keep product away from heat, sparks and all other sources of ignition. Electrically bond and ground transfer equipment. Use appropriately rated electrical equipment in areas where this material is handled and stored. Keep containers closed when not in use.

### 7.2 Conditions for Safe Storage, Including any Incompatibilities:

Keep product away from heat, sparks and all other sources of ignition. Electrically bond and ground transfer equipment. Use appropriately rated electrical equipment in areas where this material is handled and stored.

Protect containers from physical damage. Store in a cool area. Keep away from excessive heat and open flames. Keep containers closed when not in use. Store away from Strong oxidizing agents.

Empty containers retain product residues. Do not cut, weld, braze, etc. on or near empty containers. Follow all SDS precautions in handling empty containers

### 7.3 Specific end use(s):

**Industrial uses:** None

**Professional uses:** Clearing deparaffinization

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Aliphatic hydrocarbon	None Established 196 ppm TWA Manufacture recommended	None Established. 196 ppm TWA Manufacture recommended	None Established. 196 ppm TWA Manufacture recommended	50 ppm TWA 100 ppm STEL

Refer to local or national authority for exposure limits not listed above.

Chemical Name	Biological Limit Value
Aliphatic hydrocarbon	None Established

### 8.2 Exposure Controls:

**Recommended Monitoring Procedures:** Collection on charcoal tubes with analysis by gas chromatography.

**Appropriate Engineering Controls:** Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion-proof equipment where required.

#### Personal Protective Measures

**Eye/face Protection:** Wear safety glasses or chemical goggles as needed to avoid eye contact.

**Skin Protection:** Impervious clothing as needed to avoid skin contact.

**Hands:** Impervious gloves (butyl or nitrile rubber) are recommended for prolonged or repeated skin contact.

**Respiratory Protection:** None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved organic vapor respirator. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good Industrial Hygiene practice.

**Other protection:** Suitable washing facilities should be available.

## SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

### 9.1 Information on basic Physical and Chemical Properties

<b>Appearance:</b> Clear liquid	<b>Odor:</b> Odorless
<b>Odor Threshold:</b> Not determined	<b>pH:</b> Not available
<b>Melting/Freezing Point:</b> Not determined	<b>Boiling Point:</b> 155-179°C (311 -354°F)
<b>Flash Point:</b> : >40°C (>104°F)	<b>Evaporation Rate: (n-butylacetate =1)</b> 0.29
<b>Lower Flammability Limit:</b> 0.7%	<b>Vapor Pressure:</b> 1.46 mmHg @ 20°C
<b>Upper Flammability Limit:</b> 5.6%	<b>Relative Density:</b> 0.749
<b>Vapor Density(Air=1):</b> 5 at 101 kPa	<b>Octanol/Water Partition Coefficient:</b> Not available
<b>Solubility:</b> Negligible in water	<b>Decomposition Temperature:</b> Not determined
<b>Autoignition Temperature:</b> 365°C (689 °F)	<b>Explosive Properties:</b> Vapors may be explosive in confined areas.
<b>Viscosity:</b> 1.49 cSt @ 25°C	<b>Specific Gravity (H<sub>2</sub>O= 1):</b> 0.749
<b>Oxidizing Properties:</b> None	<b>Molecular Weight:</b> Not determined
<b>Molecular Formula:</b> Not determined	

9.2 Other Information: None available

## SECTION 10: STABILITY and REACTIVITY

10.1 **Reactivity:** This material is not reactive under normal conditions.

10.2 **Chemical Stability:** Normally stable.

10.3 **Possibility of Hazardous Reactions:** Reaction with strong oxidizers may generate heat and cause fire.

10.4 **Conditions to Avoid:** Avoid heat, sparks, flames, and all other sources of ignition.

10.5 **Incompatible Materials:** Oxidizing agents.

10.6 **Hazardous Decomposition Products:** Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Oxides of carbon.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on Toxicological Effects:

#### Potential Health Effects:

**Eye Contact:** May cause mild irritation with redness, tearing and swelling.

**Skin contact:** May cause mild irritation. Repeated or prolonged exposure may cause dermatitis.

**Inhalation:** May cause respiratory tract irritation and central nervous system effects such as dizziness, drowsiness, nausea, headache lightheadedness, stupor, and unconsciousness.

**Ingestion:** Swallowing may cause gastrointestinal effects, and central nervous system effects including nausea, vomiting, diarrhea, dizziness, drowsiness, and unconsciousness. Aspiration during swallowing or vomiting may cause chemical pneumonia or lung damage.

#### Acute toxicity:

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Aliphatic hydrocarbon: LD50 Oral Rat 10000 mg/kg  
LD50 Skin Rabbit 3160 mg/kg

**Skin corrosion/irritation:** Not classified as a skin irritant. Mildly irritating to skin based on test data.

**Eye damage/ irritation:** Not classified as an eye irritant.

**Respiratory Irritation:** May be irritating to the respiratory system.

**Respiratory Sensitization:** Not a respiratory sensitizer.

**Skin Sensitization:** Not a skin sensitizer.

**Germ Cell Mutagenicity:** Is not classified as a germ cell mutagen.

**Carcinogenicity:** Not listed as a carcinogen by OSHA, ACGIH, IARC, NTP, or EU Dangerous Substances Directive.

**Reproductive Toxicity:** No data available. No effects on reproduction are expected.

**Specific Target Organ Toxicity:**

Single Exposure: Aspiration during swallowing or vomiting may cause chemical pneumonia or lung damage.

Repeat Exposure: No data available.

## SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity:** No data available.

**12.2 Persistence and degradability:** Expected to be inherently biodegradable.

**12.3 Bioaccumulative Potential:** No data available.

**12.4 Mobility in Soil:** Not expected to partition to sediment.

**12.5 Results of PVT and vPvB assessment:** Not required.

**12.6 Other Adverse Effects:** May cause long term adverse effects in the aquatic environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste Treatment Methods:**

Dispose in accordance with local, state and national regulations.

## SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1268	Petroleum Distillates n.o.s.(Aliph Hydrocarbon)	3	III	No
Canadian TDG	UN1268	Petroleum Distillates n.o.s.(Aliph Hydrocarbon)	3	III	No
EU ADR/RID	UN1268	Petroleum Distillates n.o.s.(Aliph Hydrocarbon)	3	III	No

<b>IMDG</b>	UN1268	Petroleum Distillates n.o.s.(Aliph Hydrocarbon)	3	III	No
<b>IATA/ICAO</b>	UN1268	Petroleum Distillates n.o.s.(Aliph Hydrocarbon)	3	III	No

**14.6 Special Precautions for User:** None

**14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code:** Not determined.

## SECTION 15: REGULATORY INFORMATION

**15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture**

### INTERNATIONAL INVENTORIES

**EPA TSCA INVENTORY:** All of the components are listed on the TSCA inventory.

**CANADIAN ENVIRONMENTAL PROTECTION ACT:** All of the ingredients are listed on the Canadian Domestic Substances List.

**EUROPEAN UNION:** All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.

**AUSTRALIA:** All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

**CHINA:** All of the ingredients are listed on the Chinese chemical inventory.

**KOREA:** All of the components of this product are listed on the Korean Existing Chemical List (KECL).

**PHILIPPINES:** All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

**JAPAN:** All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).

### U.S. REGULATIONS

**OSHA HAZARD CLASSIFICATION:** Combustible, Target Organ Effects

**CERCLA Section 103:** Spills of this product must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**EPA SARA 302:** This product does not contain chemicals regulated under SARA Section 302.

**EPA SARA 311 HAZARD CLASSIFICATION:** Acute Health, Fire Hazard

**EPA SARA 313:** This product contains the following chemicals that are regulated under SARA Title III, section 313:  
None.

**CALIFORNIA PROPOSITION 65:** This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects (developmental toxicity): None.

### INTERNATIONAL REGULATIONS

**WHMIS CLASSIFICATION:** Class B-2, Class D-2-B

## SECTION 16: OTHER INFORMATION

**Revision History:** Updated Logo and website.

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EU Classes and Risk Phrases for Reference (See Sections 2 and 3)

Xn Harmful

R10 Flammable

R65 Harmful: May cause lung damage if swallowed.

R66 Repeated exposures may cause skin dryness or cracking.

CLP/GHS Classification and H Phrases for Reference (See Section 3)

H226 Flammable liquid and vapor

H304 May be fatal if swallowed and enters airways.

H413 May cause long lasting harmful effects to aquatic life

NFPA Rating:	Health: 1	Fire: 2	Instability: 0
HMIS Rating:	Health: 1	Fire: 2	Physical Hazard: 0

This Safety Data Sheet has been prepared in accordance with the REACH regulation in the EU and the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). It complies with the requirements of the Canadian Controlled Products Regulations and US 29CFR 1910.1200. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Leica Biosystems be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.