

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Article  
Product name. : GlobalFiler® Express and NGMSElect™ Express cartridges

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

Use of the substance/preparation : Biological Analysis

### 1.3. Details of the supplier of the safety data sheet

IntegenX, Inc.  
5720 Stoneridge Drive, Suite 300  
Pleasanton, CA 94588  
[www.integenx.com](http://www.integenx.com)

### 1.4. Emergency telephone number

Emergency number : 925-701-3400

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Product is a plastic cartridge which contains liquid. As manufactured, the product is an article and is not classified according to GHS. The following classification is for the liquid in the cartridge:

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute aquatic toxicity (Category 3)  
Acute toxicity, Oral (Category 4)  
Flammable liquid (Category 2)  
Serious eye damage (Category 1)  
Skin corrosion (Category 1C)  
Skin irritation (Category 2)  
Eye irritation (Category 2B)  
Specific target organ toxicity – single exposure (Category 3)

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Corrosive

#### Hazard Symbol(s)



#### Risk statements according to Directive 67/548/EEC or 1999/45/EC

R11: Highly flammable  
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed  
R32: Contact with acids liberates very toxic gas  
R34: Causes burns  
R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

#### Safety statements according to Directive 67/548/EEC or 1999/45/EC

S13: Keep away from food, drink and animal feedingstuffs

## Safety Data Sheet

---

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection

S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

S61: Avoid release to the environment. Refer to special instructions safety data sheet

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H225 - Highly flammable liquid and vapour

H302 - Harmful if swallowed

H314 - Causes serious eye damage

H318 - Causes serious eye damage

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

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 measures against static discharge

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P264 - Wash thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P273 - Avoid release to the environment.

P280 - Wear protective gloves/ protective clothing/ eye protection

P301 + P312 - IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340- IF INHALED: Remove person to fresh air and keep 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

P308+P313 - IF exposed or concerned: Get medical advice/ attention

P310 - Immediately call a POISON Control center or doctor/ physician

P321 - Specific treatment (see ... on this label)

P330 - Rinse mouth

P363 - Wash contaminated clothing before reuse

P370+P378 - In case of fire: Use extinguishing media appropriate for surrounding fire for extinction

P403+P235 - Store in a well ventilated place. Keep cool

P405 - Store locked up

### 2.3. Other hazards

EUH32 - Contact with acids liberates very toxic gas

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Not applicable

**3.2. Mixtures**

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Guanidinium Thiocyanate	(CAS No.) 593-84-0 (EC no) 209-812-1 (EC index no) 615-030-00-5	28-41	Xn; Harmful C; Corrosive Xi; Irritant R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R32-52/53: Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause longterm adverse effects in the aquatic environment.	Acute Toxicity, Oral (Category 4) Acute Toxicity, Inhalation (Category 4) Acute Toxicity, Dermal (Category 4) Aquatic Chronic (Category 3) Skin corrosion (Category 1C)
Ethanol	(CAS No.) 64-17-5 (EC no) 200-578-6 (EC index no) 603-002-00-5	27	F; Flammable R11	Flammable liquids (Category 2) Eye irritation (Category 2A)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

- General advice : Show this safety data sheet to the doctor in attendance.
- First-aid measures after inhalation : If inhaled, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
- First-aid measures after skin contact : Remove contaminated clothes immediately. Wash with plenty of soap and water. Consult a physician.
- First-aid measures after eye contact : Rinse thoroughly with water for 15 minutes. Consult a physician.
- First-aid measures after ingestion : Do not induce vomiting. Rinse mouth with water. Consult a physician

**4.2. Most important symptoms and effects, both acute and delayed**

May cause respiratory tract irritation. May cause eye irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**

No additional information available

**SECTION 5: Firefighting measures****5.1. Extinguishing media**

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None.

**5.2. Special hazards arising from the substance or mixture**

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : None known.
- Reactivity : None.

## Safety Data Sheet

Hazardous decomposition products : Carbon oxides, hydrogen cyanide, nitrogen oxides (NO<sub>x</sub>), sulfur oxides

### 5.3. Advice for firefighters

Protection during firefighting : Firefighters should wear full protective gear.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Wear respiratory protection. Ventillate area. Avoid breathing gas, mist and vapors

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Do not allow product to enter drains.

### 6.3. Methods and material for containment and cleaning up

For containment : No special measures required.

Methods for cleaning up : Wipe/soak up with an absorbent material and place in a suitable container for proper disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with eyes, skin and clothing.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a cool, dry, well-ventillated place. Avoid heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Ethanol (CAS 64-17-5)		
Austria	MAK (mg/m <sup>3</sup> )	3800 mg/m <sup>3</sup>
Austria	MAK (ppm)	1000 ppm
Austria	MAK Short time value (ppm)	2000 ppm
Belgium	Limit value (mg/m <sup>3</sup> )	1907 mg/m <sup>3</sup>
Belgium	Limit value (ppm)	1000 ppm
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	1000.0 mg/m <sup>3</sup>
France	VLE (mg/m <sup>3</sup> )	9500 mg/m <sup>3</sup>
France	VLE (ppm)	5000 ppm
France	VME (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>

## Safety Data Sheet

<b>Ethanol (CAS 64-17-5)</b>		
France	VME (ppm)	1000 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup> (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	500 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	1000 ppm
Italy - Portugal - USA ACGIH	ACGIH STEL (ppm)	1000 ppm
Latvia	OEL TWA (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
USA IDLH	US IDLH (ppm)	3300 ppm (10% LEL)
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
Spain	VLA-ED (mg/m <sup>3</sup> )	1910 mg/m <sup>3</sup> (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary o biocide compound)
Spain	VLA-ED (ppm)	1000 ppm (it is prohibited the partial or complete commercialization or use of this substance as a phytosanitary o biocide compound)
Switzerland	VLE (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
Switzerland	VLE (ppm)	1000 ppm
Switzerland	VME (mg/m <sup>3</sup> )	960 mg/m <sup>3</sup>
Switzerland	VME (ppm)	500 ppm
The Netherlands	MAC TGG 8H (mg/m <sup>3</sup> )	260 mg/m <sup>3</sup>
The Netherlands	MAC TGG 15MIN (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	1920 mg/m <sup>3</sup>
United Kingdom	WEL TWA (ppm)	1000 ppm
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	5760 mg/m <sup>3</sup> (calculated)
United Kingdom	WEL STEL (ppm)	3000 ppm (calculated)
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	1000 ppm
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	1000 ppm
Finland	HTP-arvo (15 min)	2500 mg/m <sup>3</sup>

## Safety Data Sheet

Ethanol (CAS 64-17-5)		
Finland	HTP-arvo (15 min) (ppm)	1300 ppm
Hungary	AK-érték	1900 mg/m <sup>3</sup>
Hungary	CK-érték	7600 mg/m <sup>3</sup>
Ireland	OEL (15 min ref) (ppm)	1000 ppm
Lithuania	IPRV (mg/m3)	1000 mg/m <sup>3</sup>
Lithuania	IPRV (ppm)	500 ppm
Lithuania	TPRV (mg/m3)	1900 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	1000 ppm
Norway	Gjennomsnittsverdier (AN) (mg/m3)	950 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (AN) (ppm)	500 ppm
Norway	Gjennomsnittsverdier (Korttidsverdi) (mg/m3)	1187.5 mg/m <sup>3</sup>
Norway	Gjennomsnittsverdier (Korttidsverdi) (ppm)	625 ppm
Poland	NDS (mg/m3)	1900 mg/m <sup>3</sup>
Romania	OEL TWA (mg/m <sup>3</sup> )	1900 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	1000 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	9500 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	5000 ppm
Slovakia	NPHV (priemerná) (mg/m3)	960 mg/m <sup>3</sup>
Slovakia	NPHV (priemerná) (ppm)	500 ppm
Slovakia	NPHV (Hraničná) (mg/m3)	1920 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (mg/m3)	1000 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	500 ppm
Sweden	kortidsvärde (KTV) (mg/m3)	1900 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	1000 ppm
Canada (Quebec)	VEMP (mg/m <sup>3</sup> )	1880 mg/m <sup>3</sup>
Canada (Quebec)	VEMP (ppm)	1000 ppm
Portugal	OEL TWA (ppm)	1000 ppm
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen

### 8.2. Exposure controls

- Appropriate engineering controls : None required under normal product handling conditions.
- Hand protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

## Safety Data Sheet

---

Skin and body protection	: Wear impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: None required under normal product handling conditions.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid enclosed in a plastic cartridge.
Appearance	: Liquid enclosed in plastic cartridge.
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available

## Safety Data Sheet

Oxidising properties : No data available

Explosive limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None.

### 10.2. Chemical stability

The product is stable at normal handling- and storage conditions.

### 10.3. Possibility of hazardous reactions

Vapors may form explosive mixture with air.

### 10.4. Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5. Incompatible materials

Strong acids, strong oxidizing agents, cyanides, alkali metals, ammonia, peroxides

### 10.6. Hazardous decomposition products

Carbon oxides, nitrogen oxides (NOx), sulfur oxides, hydrogen cyanide, ammonia

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Ethanol (CAS 64-17-5)</b>	
LD50 oral rat	7060 mg/kg
LC50 inhalation rat (mg/l)	124.7 mg/l (Exposure time: 4 h)
<b>Guanidinium Thiocyanate (CAS 593-84-0)</b>	
LD50 Oral - rat	593 mg/kg
LD50 Intraaperitoneal - mouse	300 mg/kg

Skin corrosion/irritation : Causes skin irritation.  
(Skin-rabbit-irritating to skin – 24 h)

Serious eye damage/irritation : Causes eye irritation.  
(Eyes-rabbit-mild eye irritation – 24 h – Draize Test)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : May cause cancer. (As ethanol in alcoholic beverages)  
(Carcinogenicity – mouse – oral)

<b>Ethanol (CAS 64-17-5)</b>	
IARC group	1 (As ethanol in alcoholic beverages)
National Toxicity Program (NTP) Status	1 (As ethanol in alcoholic beverages)



## Safety Data Sheet

Reproductive toxicity	: Reproductive toxin (As ethanol in alcoholic beverages) (Reproductive toxicity - human - female - oral)
Specific target organ toxicity (single exposure)	: May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	: No data available
Aspiration hazard	: No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ethanol (CAS 64-17-5)	
LC50 fish 1	12.0 - 16.0 mL/L (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	9,268 - 14,221 mg/L (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	> 100 mg/L (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	10,800 mg/L (Exposure time: 24 h - Species: Daphnia magna)
Guanidinium Thiocyanate (CAS 593-84-0)	
EC50 Daphnia	42.4 mg/L - 48 h
LC50 Poecilia reticulata	89.1 mg/L - 96 h

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

Ethanol (CAS 64-17-5)	
Log Pow	-0.32

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN

Qualifies as an excepted quantity if packaged per ADR 3.5

### 14.2. IMDG

Qualifies as an excepted quantity if packaged per IMDG 3.5

### 14.3. IATA

Qualifies as an excepted quantity if packaged per IATA DGR 2.6

## Safety Data Sheet

---

### Overland transport

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. EU-Regulations

<b>No REACH Annex XVII restrictions</b>
---

Contains no REACH candidate substance
---------------------------------------

### 15.2. International regulations

#### CANADA

<b>Ethanol (CAS 64-17-5)</b>
------------------------------

Listed on the Canadian DSL (Domestic Substances List) inventory.
--

WHMIS Classification
----------------------

Class B Division 2 - Flammable Liquid
---------------------------------------

## SECTION 16: Other information

No additional information available

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*