

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TEST™  
CTL-TEST™ PLUS  
CTL-TEST™ B

### Section 1: IDENTIFICATION

- Product name:** CTL-Test™, CTL-Test™ PLUS, CTL-Test™ B (ImmunoSpot® Kit)
- Catalog number:** CTLT-010, CTLT-005, CTLTP-010, CTLTP-005, CTLTB-010, CTLTB-005; serum-free cell culture medium included in all ImmunoSpot® Kits.
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** CTL-Test™ Medium provides a nutritionally complete and balanced environment for cells used in ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Buffered, serum-free solution containing a proprietary blend of injection-grade water supplemented with amino acids, vitamins, inorganic salts, and HSA; none of which are considered hazardous at the concentration level used.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
HSA	70024-90-7	274-272-6	N/A

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** No treatment as this product is not likely to be inhaled.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

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### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary


### Section 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use proper personal protective equipment
- Environmental precautions:** No precautions required
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation.  
Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C, protect from light
- Incompatible materials:** Strong acids, strong oxidizing agents, and strong reducers.

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- PEL:** This product does not contain any ingredients listed on OSHA PEL Threshold Limit Values.
- Personal protective equipment:** Wear chemical-resistant gloves 
- General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.
- Environmental exposure controls:** Follow best practice for site management and disposal of waste.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear orange-red liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

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### Section 10: STABILITY AND REACTIVITY

- Reactivity:** No data available
- Chemical stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** No data available
- Conditions to avoid:** No data available
- Incompatible materials:** Strong acids, strong oxidizing agents, and strong reducers.
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** No data available
- Acute effects on skin:** Not a skin irritant
- Chronic effects on skin:** No data available
- Acute effects on eyes:** Not an eye irritant
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** No data available
- Bioaccumulative potential:** No data available
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TEST™  
CTL-TEST™ PLUS  
CTL-TEST™ B

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

**U.S. federal and state regulations:**

**TSCA:** CAS# 70024-90-7

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** EC #247-272-6

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DETECTION ANTIBODY**

### Section 1: IDENTIFICATION

- Product name:** **Detection Antibody** (ImmunoSpot® Kit)
- Product description:** Any Biotinylated or FITC-conjugated component used in any species of ImmunoSpot® Kits.
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** **Detection Antibodies** are used to detect cellular secretions in ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Solution containing between 0.09% sodium azide and 1% BSA as a carrier protein.  
Neither are considered hazardous at the concentration level used.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Sodium Azide	26628-22-8	247-852-1	0.09%
BSA	9048-46-8	232-936-2	0.2-1.0%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** If inhaled, move to fresh air.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available.
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DETECTION ANTIBODY**

### Section 6: ACCIDENTAL RELEASE MEASURES


- Personal precautions:** Use proper personal protective equipment, avoid breathing vapors, mist, gas, or dust.
- Environmental precautions:** No precautions required
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation.  
Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** Strong oxidizing agents

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**PEL:** This product does not contain any ingredients listed on OSHA PEL Threshold Limit Values.

**Personal protective equipment:** Wear chemical-resistant gloves 

**General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.

**Environmental exposure controls:** Follow best practice for site management and disposal of waste.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DETECTION ANTIBODY**

### Section 10: STABILITY AND REACTIVITY

- Reactivity:** No data available
- Chemical stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** No data available
- Conditions to avoid:** No data available
- Incompatible materials:** Strong oxidizing agents
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** Sodium Azide: Oral Rat, LD50: 27mg/kg
- Acute effects on skin:** May cause skin irritation
- Chronic effects on skin:** No data available
- Acute effects on eyes:** May cause eye irritation
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** No data available
- Bioaccumulative potential:** No data available
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DETECTION ANTIBODY**

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

#### U.S. Federal and State Regulations:

**TSCA:** CAS# 26628-22-8, Sodium Azide  
CAS# 9048-46-8, BSA

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** EC #247-852-1, Sodium Azide  
EC #232-936-2, BSA

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15



## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUEBLUE™ (S3)

### Section 1: IDENTIFICATION

- Product name:** CTL-TrueBlue™ (S3) (ImmunoSpot® Kit)
- Catalog number:** CTL-STB10; a component of all single- and double-color enzymatic ImmunoSpot® Kits
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** When mixed according to protocol with accompanying components of the ImmunoSpot® Kit, CTL-True-Blue™ (S3) becomes soluble in a solution used for an alkaline phosphatase precipitating reaction to visualize the color blue in single- and double-color enzymatic ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- GHS classification:** Flammable liquid — Category 2, H225  
Acute toxicity, oral/inhalation/dermal – Category 3, H301/H331/H311  
Specific target organ toxicity (SE) – Category 1, H370

- GHS signal word:** Danger



- Hazard statements:** H225 – Highly flammable liquid and vapor  
H301/H311/H331 – Toxic if swallowed, in contact with skin, or inhaled  
H370 – Causes damage to organs

- Precautionary statements:** P210 – Keep away from heat/sparks/open flames – no smoking  
P211 – Do not spray on an open flame or other ignition source  
P233 – Keep container tightly closed  
P260 – Do not breathe fumes/gas/mist/vapors/spray  
P280 – Wash skin thoroughly after handling  
P281 – Wear protective gloves/protective clothing/eye protection/face protection

- Response statements:** P301/P312 – If swallowed call a poison control center or doctor/physician.  
P302/P303/P353 – If on skin, rinse with water/shower and remove contaminated clothing.  
P304/P311+P340 – If inhaled, move to fresh air and rest in a position comfortable for breathing, call poison control center or doctor/physician.

- Risk phrases:** R11 – Highly flammable  
R23/R24/R25 – Toxic by inhalation, in contact with skin, and if swallowed.  
R39/R23/R24/R25 – Danger of irreversible effects through inhalation, in contact with skin, and if swallowed.

- Safety phrases:** S7 – Keep container tightly closed  
S16 – Keep away from sources of ignition – no smoking  
S36/S37 – Wear suitable protective clothing and gloves.  
S45 – In case of accident or you feel unwell, seek medical advice immediately.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUEBLUE™ (S3)

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Methanol	67-56-1	200-659-6	>90%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact, immediately flush affected area thoroughly with water. Irrigate eyes and skin for at least 15 minutes and seek medical attention.
- Inhalation:** If inhaled, move to fresh air and seek medical attention.
- Ingestion:** If ingested do not induce vomiting. Rinse mouth with water and seek medical attention.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available.
- Advice for firefighters:** Use respirator; toxic gases can be evolved.




### Section 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use proper personal protective equipment.
- Environmental precautions:** Avoid run-off to waterways and sewers.
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation.  
Wear eye protection and compatible chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** Strong oxidizers

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- PEL:** TWA 200ppm
- Personal protective equipment:** Ventilation – use only with adequate ventilation to keep exposure limits low.  
Wear chemical-resistant gloves  
Wear protective goggles and lab coat   
- General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.
- Environmental exposure controls:** Follow best practice for site management and disposal of waste.  
Avoid release into the environment.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUEBLUE™ (S3)

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Dark yellow liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Miscible
<b>Melting point</b>	-98°C	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	65°C	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	11°C	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

### Section 10: STABILITY AND REACTIVITY

**Reactivity:** Flammable

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** Heat, sparks, open flame

**Incompatible materials:** Strong oxidizers

**Hazardous decomposition products:** Decomposes into carbon monoxide, carbon dioxide.

### Section 11: TOXICOLOGICAL INFORMATION

**Routes of entry/exposure:** Skin, eyes, ingestion

**Reproductive toxicity:** Damage to fetus not classifiable. Fertility classification not possible from current data.

**Acute toxicity:** Orl-hmn LDLo: 340mg/kg  
Orl-mus LD50: 870mg/kg  
Skn-rbt LD50: 20mg/kg

**Acute effects on skin:** Effects due to direct contact with skin include skin irritation.

**Chronic effects on skin:** No data available

**Acute effects on eyes:** Effects due to overexposure include eye irritation, visual impairment, or complete blindness.

**Chronic effects on eyes:** No data available

**Carcinogenicity:** No data available

**Germ cell mutagenicity:** No data available

**Symptoms of chemical exposure:** Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Effects due to overexposure may also include headache, dizziness, and drowsiness.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUEBLUE™ (S3)

### Section 12: ECOLOGICAL INFORMATION

**Toxicity:** No data available

**Persistence and  
biodegradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

**Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.

**Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.

**Precautions:** No data available

### Section 14: TRANSPORT INFORMATION

**DOT number:** Accepted quantity reportable — Quantity (RQ): 5,000 lbs.; Proper shipping name: Methanol

**UN number:** 1230 Class 3 (6.1) packing group II; Proper shipping name: Methanol

**IMDG code:** Accepted quantity, 1230 Class 3 (6.1) packing group II; Proper shipping name: Methanol

**IATA code:** Accepted quantity, 1230 Class 3 (6.1) packing group II; Proper shipping name: Methanol

### Section 15: REGULATORY INFORMATION

#### U.S. federal and state regulations:

**TSCA:** CAS# 67-56-1, Methanol

**California proposition 65:** This product contains a chemical known to cause birth defects or other reproductive harm.

**CERCLA/SARA:** SARA 302 – No chemicals in the material are subject to the reporting requirements.  
SARA 313 – The following components are subject to reporting levels:  
Methanol, CAS-No.65-56-1.  
SARA 311/312 Hazards – Fire hazard, acute health hazard, chronic health hazard.

**EU labeling:** EC# 200-659-6

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R1)

### Section 1: IDENTIFICATION

- Product name:** CTL-TrueRed™ (R1) (ImmunoSpot® Kit)
- Catalog number:** CTL-STR10; a component of all double-color enzymatic ImmunoSpot® Kits
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** When mixed according to protocol with accompanying components of the ImmunoSpot® Kit, CTL-TrueRed™ (R1) is a solution used in a peroxidase precipitating reaction to visualize the color red in double-color enzymatic ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- GHS classification:** N,N-Dimethylformamide  
Flammable liquid — Category 3, H226  
Acute toxicity, Inhalation/Dermal — Category 4, H332/H312  
Eye irritation — Category 1A, H312  
Reproductive toxicity — Category 1B, H360

- GHS signal word:** Danger



- Hazard statements:** H226 – Flammable liquid and vapor  
H312, H332 – Harmful if in contact of skin  
H319 – Causes serious eye irritation  
H360 – May damage fertility or the unborn child

- Precautionary statements:** P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P264 – Wash skin thoroughly after handling  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.

- Response statements:** P304/P340 – If inhaled, move to fresh air and rest in a position comfortable for breathing.  
P302/P303/P353/P362 – If on skin or hair, rinse skin or hair with water/shower and take off contaminated clothing.  
P305/P351/P338/P313 – If in eyes, rinse cautiously with water for several minutes; remove contact lenses if present and easy to do. Continue rinsing. Get medical advice/attention.  
P308/P313 – If exposed or concerned, get medical advice/attention.

- Risk phrases:** R20 – Harmful if inhaled  
R21 – Harmful if in contact with skin  
R22 – Harmful if swallowed  
R36 – Irritating to eyes

- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R1)

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Dimethylformamide	68-12-2	200-679-5	>90%

### Section 4: FIRST-AID MEASURES

#### Description of first aid measures:

- Skin and eyes:** In case of contact, immediately flush affected area thoroughly with water. Irrigate eyes and skin for at least 15 minutes and seek medical attention.
- Inhalation:** If inhaled, move to fresh air and seek medical attention.
- Ingestion:** If ingested do not induce vomiting. Rinse mouth with water and seek medical attention.

### Section 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.

#### Special hazards arising from the substance or mixture:

No further relevant information available.

**Advice for firefighters:** Use respirator; toxic gases can be evolved.

### Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use proper personal protective equipment.

**Environmental precautions:** Avoid run-off to waterways and sewers.

**Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

**Precautions for safe handling:** Use only with adequate ventilation.  
Wear eye protection and chemical-resistant gloves.

**Conditions for safe storage:** Store refrigerated at 4°C

**Incompatible materials:** Strong oxidizers

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**PEL:** N/A

**Personal protective equipment:** Ventilation – use only with adequate ventilation to keep exposure limits low.  
Wear chemical-resistant gloves  
Wear protective goggles and lab coat



**General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.

**Environmental exposure controls:** Follow best practice for site management and disposal of waste.  
Avoid release into the environment.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R1)

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear light yellow liquid	<b>Vapor pressure</b>	3.6hPa at 25°
<b>Odor</b>	Amine-like	<b>Vapor density</b>	2.52
<b>Odor threshold</b>	Not available	<b>Relative density</b>	0.944g/ml
<b>pH</b>	6.7	<b>Solubility</b>	Water miscible
<b>Melting point</b>	-61°C	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	153°C	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	58°C	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Upper: 15.2% Lower: 2.2%		

### Section 10: STABILITY AND REACTIVITY

**Reactivity:** Flammable

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** Heat, hot surfaces, sparks, open flames, and other ignition sources

**Incompatible materials:** Strong oxidizers

**Hazardous decomposition products:** Decomposes into carbon monoxide, carbon dioxide, and nitrogen oxides.

### Section 11: TOXICOLOGICAL INFORMATION

**Routes of entry/exposure:** Skin, eyes, ingestion

**Reproductive toxicity:** May cause congenital malformation of the fetus

**Acute toxicity:** Orl-rat LD50: 2800mg/kg  
lpr-mus LD50: 650mg/kg

**Acute effects on skin:** Effects due to direct contact of skin include skin irritation.

**Chronic effects on skin:** No data available

**Acute effects on eyes:** Causes eye irritation from short and long-term exposure.

**Chronic effects on eyes:** No data available

**Carcinogenicity:** No data available

**Germ cell mutagenicity:** No data available

**Symptoms of chemical exposure:** No data available



## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R1)

### Section 12: ECOLOGICAL INFORMATION

**Toxicity:** No data available  
**Persistence and biodegradability:** No data available  
**Bioaccumulative potential:** No data available  
**Mobility in soil:** No data available  
**Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

**Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.  
**Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.  
**Precautions:** No data available

### Section 14: TRANSPORT INFORMATION

**DOT number:** Accepted quantity: Reportable quantity (RQ): 100lbs  
Proper shipping name: N,N-dimethylformamide  
**UN number:** 2265 Class 3 packing group III; Proper shipping name: N,N-dimethylformamide  
**IMDG code:** Accepted quantity: 2265 Class 3, Packing group III  
Proper shipping name: N,N-dimethylformamide  
**IATA code:** Accepted quantity: 2265 Class 3, Packing group III  
Proper shipping name: N,N-dimethylformamide

### Section 15: REGULATORY INFORMATION

#### U.S. federal and state regulations:

**TSCA:** CAS# 68-12-2  
**California proposition 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.  
**CERCLA/SARA:** SARA 302 – No chemicals in the material are subject to the reporting requirements  
SARA 313 – The following components are subject to reporting levels:  
N,N-dimethylformamide, CAS# 68-12-2  
SARA 311/312 Hazards – Fire hazard, acute health hazard, chronic health hazard  
**EU labeling:** EC# 200-679-5

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15



## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT B**

### Section 1: IDENTIFICATION

- Product name:** Diluent B (ImmunoSpot® Kit)
- Product Description:** A component used in all ImmunoSpot® Kits.
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** Diluent B is used to detect cellular secretions in ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Solution containing between 0.05% Tween 20 and 1% BSA as a carrier protein; neither of which are considered hazardous at the concentration level used.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Tween 20	9005-64-5	500-018-3	0.05%
BSA	9048-46-8	232-936-2	1.0%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** If inhaled, move to fresh air.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** Carbon oxides
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT B**


### Section 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use proper personal protective equipment, avoid breathing vapors, mist, gas, or dust.
- Environmental precautions:** No precautions required
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation. Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** Strong oxidizing agents

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- PEL:** This product does not contain any ingredients listed on OSHA PEL Threshold Limit Values.
- Personal protective equipment:** Wear chemical-resistant gloves 
- General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating or drinking. Safety shower and eye wash should be available and close to work areas.
- Environmental exposure controls:** Follow best practice for site management and disposal of waste. Avoid release into drains and the environment.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT B**

### Section 10: STABILITY AND REACTIVITY

- Reactivity:** No data available
- Chemical stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** No data available
- Conditions to avoid:** No data available
- Incompatible materials:** Strong oxidizing agents
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** Oral Rat, LD50, 40: 554mg/kg
- Acute effects on skin:** May cause skin irritation
- Chronic effects on skin:** No data available
- Acute effects on eyes:** May cause eye irritation
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** No data available
- Bioaccumulative potential:** No data available
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT B**

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

**U.S. federal and state regulations:**

**TSCA:** CAS# 9005-64-5, Tween 20  
CAS# 9048-46-8, BSA

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** EC #500-018-3, Tween 20  
EC #232-936-2, BSA

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R2)

### Section 1: IDENTIFICATION

- Product name:** CTL-TrueRed™ (R2) (ImmunoSpot® Kit)
- Product description:** CTL-STR10; a component of all double-color enzymatic ImmunoSpot® Kits
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** When mixed according to protocol with accompanying components of the ImmunoSpot® Kit, CTL-TrueRed™ (R2) is a solution used in a peroxidase precipitating reaction to visualize the color red in double-color enzymatic ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Solution containing 1.5% hydrogen peroxide which is not considered hazardous at the concentration level used.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Hydrogen Peroxide	7722-84-1	231-765-0	1.5%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** If inhaled, move to fresh air.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available.
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R2)



### Section 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use proper personal protective equipment.
- Environmental precautions:** Avoid run-off to waterways and sewers.
- Containment/ clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation.  
Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** Ammonia, bases do not mix with chlorinated products.

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- PEL:** Consult local authorities for acceptable exposure limits
- Personal protective equipment:** Wear chemical-resistant gloves and lab coat.  
- General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.
- Environmental exposure controls:** Follow best practice for site management and disposal of waste.  
Avoid release into the environment.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	>93.4°C	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R2)

### Section 10: STABILITY AND REACTIVITY

- Reactivity:** Product is stable
- Chemical stability:** Stable under recommended storage conditions
- Possibility of hazardous reactions:** Oxygen
- Conditions to avoid:** Freezing
- Incompatible materials:** Amonia, bases do not mix with chlorinated products.
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** Oral LD50: >5000mg/kg; Dermal LD50: >2000mg/kg
- Acute effects on skin:** None
- Chronic effects on skin:** No data available
- Acute effects on eyes:** None
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** No data available
- Bioaccumulative potential:** No data available
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

CTL-TRUERED™ (R2)

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

**U.S. federal and state regulations:**

**TSCA:** CAS# 7722-84-1

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** SARA 302 – No chemicals in the material are subject to the reporting requirements  
SARA 313 – No chemicals in the material are subject to the reporting requirements.  
SARA 311/312 Hazards – Fire hazard, acute health hazard, chronic health hazard

**EU labeling:** EC# 247-765-0

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15



## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT C**

### Section 1: IDENTIFICATION

- Product name:** Diluent C (ImmunoSpot® Kit)
- Product description:** A component used in all ImmunoSpot® Kits.
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** Diluent C is used to detect cellular secretions in ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Solution containing 1% BSA as a carrier protein; not considered hazardous at the concentration level used.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
BSA	9048-46-8	232-936-2	1.0%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** If inhaled, move to fresh air.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available.
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT C**


### Section 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Use proper personal protective equipment, avoid breathing vapors, mist, gas, or dust.
- Environmental precautions:** No precautions required
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustable material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation. Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** N/A

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- PEL:** This product does not contain any ingredients listed on OSHA PEL Threshold Limit Values.
- Personal protective equipment:** Wear chemical-resistant gloves 
- General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating or drinking. Safety shower and eye wash should be available and close to work areas.
- Environmental exposure controls:** Follow best practice for site management and disposal of waste.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT C**

### Section 10: STABILITY AND REACTIVITY

- Reactivity:** No data available
- Chemical stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** No data available
- Conditions to avoid:** No data available
- Incompatible materials:** No data available
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** No data available
- Acute effects on skin:** May cause skin irritation
- Chronic effects on skin:** No data available
- Acute effects on eyes:** May cause eye irritation
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** No data available
- Bioaccumulative potential:** No data available
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT C**

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

**U.S. federal and state regulations:**

**TSCA:** CAS# 9048-46-8

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** EC# 232-936-2

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT BLUE**

### Section 1: IDENTIFICATION

- Product name:** Diluent Blue (ImmunoSpot® Kit)
- Product description:** A component used in single- and double-color enzymatic ImmunoSpot® Kits.
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** When mixed according to protocol with accompanying components of the ImmunoSpot® Kit, **Diluent Blue** is a solution used in an alkaline phosphatase precipitating reaction to visualize the color blue in single- and double-color enzymatic ELISPOT assays. For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

- Classification:** Solution containing 1.2% Tris by weight; non-hazardous.
- GHS signal word:** Not a hazardous mixture
- Hazard statements:** Not a hazardous mixture
- Precautionary statements:** Not a hazardous mixture
- Response statements:** Not a hazardous mixture
- Risk phrases:** Not a hazardous mixture
- Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Tris	77-86-1	201-164-4	1.2%

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

- Skin and eyes:** In case of contact with eyes, wash or flush eyes as a precaution.
- Inhalation:** If inhaled, move to fresh air.
- Ingestion:** If ingested do not induce vomiting; rinse mouth with water.

### Section 5: FIRE-FIGHTING MEASURES

- Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.
- Special hazards arising from the substance or mixture:** No further relevant information available.
- Advice for firefighters:** Wear self-contained breathing apparatus if necessary.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT BLUE**

### Section 6: ACCIDENTAL RELEASE MEASURES


- Personal precautions:** Use proper personal protective equipment, avoid breathing vapors, mist, gas, or dust.
- Environmental precautions:** Avoid run-off to waterways and sewers.
- Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustable material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

- Precautions for safe handling:** Use only with adequate ventilation. Wear chemical-resistant gloves.
- Conditions for safe storage:** Store refrigerated at 4°C
- Incompatible materials:** N/A

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**PEL:** This product does not contain any ingredients listed on OSHA PEL Threshold Limit Values.

**Personal protective equipment:** Wear chemical-resistant gloves 

**General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating or drinking. Safety shower and eye wash should be available and close to work areas.

**Environmental exposure controls:** Follow best practice for site management and disposal of waste. Avoid release into the environment.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

DILUENT BLUE

### Section 10: STABILITY AND REACTIVITY

- Reactivity:** No data available
- Chemical stability:** Stable under recommended storage conditions.
- Possibility of hazardous reactions:** No data available
- Conditions to avoid:** No data available
- Incompatible materials:** No data available
- Hazardous decomposition products:** None

### Section 11: TOXICOLOGICAL INFORMATION

- Routes of entry/exposure:** Skin, eyes, ingestion
- Reproductive toxicity:** No data available
- Acute toxicity:** Oral rat, LD50: 5900mg/kg
- Acute effects on skin:** No skin irritation
- Chronic effects on skin:** No data available
- Acute effects on eyes:** No eye irritation
- Chronic effects on eyes:** No data available
- Carcinogenicity:** No data available
- Germ cell mutagenicity:** No data available
- Symptoms of chemical exposure:** None known

### Section 12: ECOLOGICAL INFORMATION

- Toxicity:** No data available
- Persistence and biodegradability:** Readily biodegradable
- Bioaccumulative potential:** No bioaccumulation
- Mobility in soil:** No data available
- Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

- Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.
- Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.
- Precautions:** No data available

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT BLUE**

### Section 14: TRANSPORT INFORMATION

**DOT number:** Not a dangerous good

**UN number:** Not a dangerous good

**IMDG code:** Not a marine pollutant

**IATA code:** Not a dangerous good

### Section 15: REGULATORY INFORMATION

**U.S. federal and state regulations:**

**TSCA:** CAS# 77-86-1

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** EC# 201-164-4

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-1



## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT RED**

### Section 1: IDENTIFICATION

- Product name:** Diluent Red (ImmunoSpot® Kit)
- Catalog number:** CTL-STR10; a component of all double-color enzymatic ImmunoSpot® Kits
- Company name:** Cellular Technology Limited  
20521 Chagrin Boulevard  
Shaker Heights, OH 44122-5350 USA  
+1 216-791-5084 T • +1 216-751-1373 F  
+1 888-791-4005 Toll Free US  
kits@immunospot.com  
www.immunospot.com
- Recommended usage:** When mixed according to protocol with accompanying components of the ImmunoSpot® Kit, **Diluent Red** is a solution used in a peroxidase precipitating reaction to visualize the color red in double-color enzymatic ELISPOT assays.  
For laboratory research use only. Not for use in diagnostic or therapeutic procedures.
- Emergency telephone:** +1 216-791-5084; +1 888-791-4005 Toll Free US

### Section 2: HAZARD(S) IDENTIFICATION

**GHS classification:** Organic liquid; 11.8% by weight; R20/21/22-36; Xn

**GHS signal word:** Warning



**Hazard statements:** H332 – Harmful if inhaled  
H313 – Harmful if in contact of skin  
H302 – Harmful if swallowed  
H320 – Irritating to eyes

**Precautionary statements:** P261 – Avoid breathing dust, fumes, gas, mist, vapors, and/or spray.  
P271 – Use in a well ventilated area.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.

**Response statements:** P304+P340 – If inhaled, move to fresh air and rest in a position comfortable for breathing.  
P312 – Call a Poison Control Center or doctor/physician if you feel unwell.  
P353 – If on skin, rinse skin with water/shower.  
P332+P313 – If skin irritation occurs, get medical attention.

**Risk phrases:** R20 – Harmful if inhaled  
R21 – Harmful if in contact with skin  
R22 – Harmful if swallowed  
R36 – Irritating to eyes

**Safety phrases:** S36/S37 – Wear suitable protective clothing and gloves.

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINS	CAS NUMBER	EC NUMBER	CONTENT
Organic liquid	N/A	N/A	11.8%

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT RED**

### Section 4: FIRST-AID MEASURES

**Description of first aid measures:**

**Skin and eyes:** In case of contact, immediately flush affected area thoroughly with water. Irrigate eyes and skin for at least 15 minutes.

**Inhalation:** If inhaled, move to fresh air and seek medical attention.

**Ingestion:** If ingested do not induce vomiting. Give several glasses of water to drink in order to dilute. If large amounts of product are swallowed, seek medical attention.

### Section 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Carbon dioxide extinguishing powder, dry chemicals, or water spray can be used for small fires. Fight larger fires with water spray or alcohol-resistant foam.

**Special hazards arising from the substance or mixture:** No further relevant information available.

**Advice for firefighters:** Use respirator; toxic gases can be evolved.

### Section 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use proper personal protective equipment.

**Environmental precautions:** Avoid run-off to waterways and sewers.

**Containment/clean-up measures:** For spills and leaks, ventilate area of leak or spill. Absorb spill using an absorbent, noncombustible material and dispose of collected material according to local and regional regulations.

### Section 7: HANDLING AND STORAGE

**Precautions for safe handling:** Use only with adequate ventilation.  
Wear eye protection and chemical-resistant gloves.

**Conditions for safe storage:** Store refrigerated at 4°C

**Incompatible materials:** Strong oxidizers

### Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**PEL:** N/A

**Personal protective equipment:** Ventilation – use only with adequate ventilation to keep exposure limits low.  
Wear chemical-resistant gloves  
Wear protective goggles



**General protective hygiene considerations:** Handle in accordance with good industrial hygiene and safety practice.  
Wash hands thoroughly with soap and water after handling and before eating or drinking.  
Safety shower and eye wash should be available and close to work areas.

**Environmental exposure controls:** Follow best practice for site management and disposal of waste.  
Avoid release into the environment.

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT RED**

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear colorless liquid	<b>Vapor pressure</b>	Not available
<b>Odor</b>	Odorless	<b>Vapor density</b>	Not available
<b>Odor threshold</b>	Not available	<b>Relative density</b>	Not available
<b>pH</b>	Not available	<b>Solubility</b>	Complete
<b>Melting point</b>	Not available	<b>Partition coefficient</b>	Not available
<b>Freezing point</b>	Not available	<b>Auto-ignition temperature</b>	Not available
<b>Initial boiling point and range</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Flash point</b>	Not available	<b>Evaporation rate</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity</b>	Not available
<b>Upper/lower flammability or explosive limits</b>	Not available		

### Section 10: STABILITY AND REACTIVITY

**Reactivity:** Oxidizers

**Chemical stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** No data available

**Conditions to avoid:** No data available

**Incompatible materials:** Strong oxidizers

**Hazardous decomposition products:** Decomposes into carbon monoxide, carbon dioxide, and nitrogen oxides.

### Section 11: TOXICOLOGICAL INFORMATION

**Routes of entry/exposure:** Skin, eyes, ingestion

**Reproductive toxicity:** No data available

**Acute toxicity:** Orl-mus LD50: 269mg/kg  
IVN-mus LD50: 612g/kg

**Acute effects on skin:** Causes skin irritation from short and long-term exposure.

**Chronic effects on skin:** No data available

**Acute effects on eyes:** Causes eye irritation from short and long-term exposure.

**Chronic effects on eyes:** No data available

**Carcinogenicity:** No data available

**Germ cell mutagenicity:** No data available

**Symptoms of chemical exposure:** Irritation and redness of skin and eyes

## SAFETY DATA SHEET (SDS)

OSHA HCS 29 CFR 1910.1200(g) and GHS Rev 06

**DILUENT RED**

### Section 12: ECOLOGICAL INFORMATION

**Toxicity:** No data available

**Persistence and  
biodegradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**Other adverse effects:** No data available on the adverse effects of this material on the environment.

### Section 13: DISPOSAL CONSIDERATIONS

**Product waste treatment:** Dispose of product waste in accordance with applicable national, regional, or local regulations.

**Packaging waste treatment:** Dispose of packaging waste in accordance with applicable national, regional, or local regulations.

**Precautions:** No data available

### Section 14: TRANSPORT INFORMATION

**DOT number:** No data available

**UN number:** No data available

**IMDG code:** Not a marine pollutant

**IATA code:** No data available

### Section 15: REGULATORY INFORMATION

#### U.S. federal and state regulations:

**TSCA:** Not listed

**California proposition 65:** Not listed as one of California's known or potential carcinogens.

**CERCLA/SARA:** Not listed

**EU labeling:** Not listed

### Section 16: OTHER INFORMATION

The information and recommendations in this Safety Data Sheet are believed to be accurate as of the date of issue. Nothing herein shall be deemed to create a warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this data to formulate the necessary safety precautions, as well as to decide the suitability of the material or product for any particular purpose. This product is intended for use only by persons having necessary technical skills and facilities for its proper handling. Since the conditions and manner are outside of the control of Cellular Technology Limited (CTL), CTL shall not be held liable for any damage or injury resulting from the use, misuse, or mishandling of the above product, or the information contained in this Safety Data Sheet.

Issued 12-01-15