

SAFETY DATA SHEET (SDS)

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

COATING ANTIBODY

Section 1: IDENTIFICATION

- Product name:** Coating Antibody (ImmunoSpot® Kit)
- Product Description:** A component of all human 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:** The **Coating Antibody** is used to capture cellular secretions from a PVDF membrane 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 0.02% thimerosal, 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
Thimerosal	54-64-8	200-210-4	0.2%

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.

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COATING ANTIBODY

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, 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:** 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

Appearance	Clear colorless liquid	Vapor pressure	Not available
Odor	Odorless	Vapor density	Not available
Odor threshold	Not available	Relative density	Not available
pH	Not available	Solubility	Complete
Melting point	Not available	Partition coefficient	Not available
Freezing point	Not available	Auto-ignition temperature	Not available
Initial boiling point and range	Not available	Decomposition temperature	Not available
Flash point	Not available	Evaporation rate	Not available
Flammability (solid, gas)	Not available	Viscosity	Not available
Upper/lower flammability or explosive limits	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:** 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: 75mg/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

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COATING 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# 54-64-8

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

CERCLA/SARA: Not listed

EU labeling: EC #200-210-4

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 12-01-15

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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.

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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

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

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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

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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

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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

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

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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.

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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:** Amonia, 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

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

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

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

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

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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

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

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

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

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

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