HURST SCIENTIFIC

Safety Data Sheet
PAPANICOLAOU EA50

SECTION 1: Identification

GHS Product identifier

Product name	PAPANICOLAOU EA50
Product number	EA50-500M, 1L, 2.5L, 5L
Brand	Hurstchem

Other means of identification
Pap Stain

Recommended use of the chemical and restrictions on use
Laboratory Reagent

Supplier's details

Name	Hurst Scientific
Address	2 Transit Place 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement
Classified as a Hazardous substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as a Dangerous goods according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 8

- Flammable liquids, Cat. 3
- Eye damage/irritation, Cat. 2A
- Acute toxicity, dermal, Cat. 3

- Acute toxicity, inhalation, Cat. 3
- Acute toxicity, oral, Cat. 3
- Specific target organ toxicity, single exposure, Cat. 1

GHS label elements, including precautionary statements

Pictograms

1. Flame; 2. Exclamation mark; 3. Skull and crossbones; 4. Health hazard

Signal word	**Danger**

Hazard statement(s)

H226	Flammable liquid and vapor
H319	Causes serious eye irritation
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs [organs, route]

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...
P264	Wash … thoroughly after handling.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P370+P378	In case of fire: Use … to extinguish.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P316	IF exposed or concerned: Get emergency medical help immediately.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

Hazardous components

1. Ethanol

Concentration	> 60 % (volume)
EC no.	200-578-6
CAS no.	64-17-5
Index no.	603-002-00-5

- Flammable liquids, Cat. 2

H225	Highly flammable liquid and vapor

2. Methanol

Concentration	< 30 % (volume)
EC no.	200-659-6
CAS no.	67-56-1
Index no.	603-001-00-X

- Flammable liquids, Cat. 2
- Acute toxicity, inhalation, Cat. 3
- Acute toxicity, dermal, Cat. 3
- Acute toxicity, oral, Cat. 3
- Specific target organ toxicity following single exposure, Cat. 1

H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs [organs, route]
SCLs/M-factors/ATEs	*
	STOT SE 1; H370: C ≥ 10 %
	STOT SE 2; H371: 3 % ≤ C < 10 %

3. Water/Aqua/Eau

Concentration	Balance
CAS no.	7732-18-5

4. Acetic acid

Concentration	< 1 % (volume)
EC no.	200-580-7
CAS no.	64-19-7
Index no.	607-002-00-6

- Flammable liquids, Cat. 3
- Skin corrosion/irritation, Cat. 1A

H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage
SCLs/M-factors/ATEs	Skin Corr. 1A; H314: C ≥ 90 %
	Skin Corr. 1B; H314: 25 % ≤ C < 90 %
	Skin Irrit. 2; H315: 10 % ≤ C < 25 %
	Eye Irrit. 2; H319: 10 % ≤ C < 25 %

5. Phosphotungstic Acid Hydrate

Concentration	< 1 % (volume)
CAS no.	12501-23-4

6. EOSIN

Concentration	< 1 % (volume)
EC no.	239-138-3
CAS no.	17372-87-1

7. LIGHT GREEN SF, YELLOWISH

Concentration	< 1 % (volume)
EC no.	225-906-5
CAS no.	5141-20-8

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	Evacuate to fresh air immediately. If unconscious place in recovery position, provide artificial respiration if breathing ceases.
In case of skin contact	Remove contaminated clothing and wash affected area with soap and water thoroughly. If irritation develops, seek medical attention.
In case of eye contact	Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention.
If swallowed	DO NOT induce vomiting. Wash mouth out with copious amounts of water. Seek immediate medical attention.

Personal protective equipment for first-aid responders
Eye wash station, safety shower and First Aid kit.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically and based on individual reactions of patient and judgement of a Doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Water fog or foam. Keep containers cool with water spray.

Specific hazards arising from the chemical

Ethanol: Carbon oxides

Special protective actions for fire-fighters
Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment.

Further information
Hazchem code 3WE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
If spill or leakage occurs eliminate all sources of ignition and take measures to prevent static discharge. Clear area of all persons not involved with the clean-up and ensure all others wear suitable protective equipment and breathing apparatus. Prevent run off into drains and if contamination of waterways has occurred notify the local emergency services. Use water spray to disperse vapour and do not smoke. Ventilate the area well and ensure the atmosphere is clear of contaminant prior to allowing personnel to return.

Methods and materials for containment and cleaning up
Absorb with vermiculite or similar and place into suitably labelled containers for later disposal. Wash the affected area with a large volume of water.

SECTION 7: Handling and storage

Precautions for safe handling
Use in well-ventilated areas away from all sources of ignition. Wear appropriate protective equipment. Observe good personal hygiene practices and procedures to avoid contact with eyes, skin and clothing.

Conditions for safe storage, including any incompatibilities
Store in tightly closed containers in a cool, dry environment away from sources of ignition and incompatibles. Check regularly for leaks.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 64-17-5
Ethanol
AU/SWA (Australia): 1000 ppm; 1880 mg/m3 TWA inhalation

CAS: 64-19-7
Acetic acid
AU/SWA (Australia): 15 ppm; 37 mg/m3 STEL inhalation; 10 ppm; 25 mg/m3 TWA inhalation

CAS: 67-56-1
Methanol
AU/SWA (Australia): 250 ppm; 328 mg/m3 STEL inhalation; 200 ppm; 262 mg/m3 TWA inhalation

Appropriate engineering controls
Ensure adequate ventilation to maintain airborne concentrations below national exposure standards.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Wear suitable protective clothing, safety glasses or chemical resistant splash-proof goggles to prevent eye contact and nitrile/neoprene gloves. If working within a confined area use a suitable respirator at all times.

Skin protection
Wear suitable protective clothing, safety glasses or chemical resistant splash-proof goggles to prevent eye contact and nitrile/neoprene gloves. If working within a confined area use a suitable respirator at all times.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Dark Red/Green liquid
Odor	Sweet solvent odour

Melting point/freezing point	Not available
Boiling point or initial boiling point and boiling range	78°C
Flammability	
Lower and upper explosion limit/flammability limit	Ethanol: 3.5% - 19%
Flash point	Ethanol: 13°C (closed cup)
Auto-ignition temperature	
Decomposition temperature	
pH	2.4-2.9
Kinematic viscosity	
Solubility	Soluble
Partition coefficient n-octanol/water (log value)	
Vapor pressure	50mm Hg (@20°C)
Density and/or relative density	Approx. 0.8 (water = 1)
Relative vapor density	Not available

SECTION 10: Stability and reactivity

Chemical stability
Stable under recommended conditions for use and storage.

Possibility of hazardous reactions
None known.

Conditions to avoid
Heat, direct sunlight, sparks, flame and build-up of static electricity.

Incompatible materials

Ethanol: Alkali metals, Oxidizing agents, Peroxides

Methanol: Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

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Acetic acid: Oxidizing agents, Soluble carbonates and phosphates, Hydroxides, Metals, Peroxides, permanganates, e.g. potassium permanganate, Amines, Alcohols, Nitric acid

Hazardous decomposition products

Acetic acid: Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ethanol: ACGIH: A3 Confirmed animal carcinogen with unknown relevance to humans.

Skin corrosion/irritation
No classification.

Serious eye damage/irritation
Can cause damage to eyes.

Respiratory or skin sensitization
Not data available.

Germ cell mutagenicity
No data available.

Carcinogenicity
Light Green has been classified by the IARC as a Group 3 Carcinogen – Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity
No data available.

Specific target organ toxicity (STOT) - single exposure
May cause organ damage.

Specific target organ toxicity (STOT) - repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information

Ethanol: Stomach - Irregularities - Based on Human Evidence

Methanol: *TOXICITY:
typ. dose mode specie amount units other
LDLo orl hmn 340 mg/kg
TCLo ihl hmn 86000 mg/m3
LDLo unr man 868 mg/kg
LD50 orl rat 5628 mg/kg
LC50 ihl rat 64000 ppm/4H
LD50 ipr rat 9540 mg/kg
LD50 orl mus 870 mg/kg
LCLo ihl mus 50 gm/m3/2H
LDLo ipr mus 120 mg/kg
LD50 scu mus 9800 mg/kg
LD50 ivn mus 5673 mg/kg
LDLo orl dog 7500 mg/kg
LDLo orl mky 7000 mg/kg
LCLo ihl mky 1000 ppm
LDLo skn mky 500 mg/kg
LCLo ihl cat 44000 mg/m3/6H
LDLo ivn cat 118 mg/kg
LDLo orl rbt 7500 mg/kg
LD50 skn rbt 20 gm/kg
LDLo orl man 13 gm/kg

*AQTX/TLM96: >1000 ppm

*SAX TOXICITY EVALUATION:
THR = A skin, eye irritant. A human inhalation IRRITANT. A human eye
irritant. HIGH human oral; HIGH intraperitoneal, intravenous; MODERATE

inhalation, oral, skin; LOW skin, oral, inhalation, intraperitoneal, subcutaneous. Methyl alcohol possesses distinct narcotic properties. Coma from massive exposures may last as long as 2-4 days.

*CARCINOGENICITY: Not available

*MUTATION DATA:
test lowest dose | test lowest dose
---------- ---------- | ---------- ----------
mmo-smc 12 pph | cyt-smc 500 umol/tube
cyt-grh-par 3000 ppm | dni-hmn:lym 300 mmol/L
dnd-rat-orl 10 umol/kg | cyt-mus-orl 1 gm/kg
cyt-mus-ipr 75 mg/kg | mma-mus:lym 7900 mg/L

*TERATOGENICITY:
Reproductive Effects Data:
TDLo: orl-rat 7500 mg/kg (17-19D preg)
TCLo: ihl-rat 20000 ppm/7H (1-22D preg)
TDLo: ipr-mus 5 gm/kg (5D male)

*STANDARDS, REGULATIONS & RECOMMENDATIONS:
OSHA: Federal Register (1/19/89) and 29 CFR 1910.1000 Subpart Z
Transitional Limit: PEL-TWA 200 ppm [610]
Final Limit: PEL-TWA 200 ppm (skin); STEL 250 ppm [610]
ACGIH: TLV-TWA 200 ppm (skin); STEL 250 ppm [610]
NIOSH Criteria Document: Recommended Exposure Limit to this compound-air:
PEL-TWA 200 ppm; Ceiling Limit 800 ppm/15M [610]
NFPA Hazard Rating: Health (H): 1
Flammability (F): 3
Reactivity (R): 0
H1: Materials only slightly hazardous to health (see NFPA for details).
F3: Materials which can be ignited under almost all normal temperature conditions (see NFPA for details).
R0: Materials which are normally stable even under fire exposure conditions and which are not reactive with water (see NFPA for details).

*OTHER TOXICITY DATA:
Skin and Eye Irritation Data:
eye-hmn 5 ppm
skn-rbt 500 mg/24H MOD
eye-rbt 40 mg MOD
Review: Toxicology Review-5
Standards and Regulations: DOT-Hazard: Flammable liquid; Label: Flammable liquid
DOT-IMO: Flammable liquid; Label: Flammable liquid, Poison
Status: "NIOSH Manual of Analytical Methods, 3rd Ed."
Reported in EPA TSCA Inventory, 1983
EPA Genetic Toxicology Program, January 1984
EPA TSCA Section 8(e) Status Report 8EHQ-0378-0108
Meets criteria for proposed OSHA Medical Records Rule

EOSIN: *TOXICITY:
typ. dose mode specie amount units other
LDLo ipr rat 500 mg/kg
LDLo scu rat 1500 mg/kg

LD50 orl mus 2344 mg/kg
LD50 ivn mus 550 mg/kg
LDLo ivn rbt 300 mg/kg

*AQTX/TLM96: Not available

*SAX TOXICITY EVALUATION:
THR = An experimental +/- carcinogen. MODERATE via intravenous route.

*CARCINOGENICITY:
Tumorigenic Data:
TDLo: scu-rat 13 gm/kg/1Y-I
TD : scu-rat 14 gm/kg/78W-I
Review: IARC Cancer Review: Animal Inadequate Evidence
IARC: Not classifiable as a human carcinogen (Group 3) [610]

*MUTATION DATA:
test lowest dose | test lowest dose
---------- ---------- | ---------- ----------
dnr-bcs 2 mg/disc |

*TERATOGENICITY (Reproductive Effects Data): Not available

*STANDARDS, REGULATIONS & RECOMMENDATIONS:
OSHA: None
ACGIH: None
NIOSH Criteria Document: None
NFPA Hazard Rating: Health (H): None
Flammability (F): None
Reactivity (R): None

*OTHER TOXICITY DATA:
Status: Reported in EPA TSCA Inventory, 1983
EPA Genetic Toxicology Program, January 1984
Meets criteria for proposed OSHA Medical Records Rule

LIGHT GREEN SF, YELLOWISH: mouse LD50 intravenous 700mg/kg (700mg/kg) Toxicology and Applied Pharmacology. Vol. 44, Pg. 225, 1978.
Link to PubMed
mouse LD50 subcutaneous 525mg/kg (525mg/kg) Zeitschrift fuer Krebsforschung. Vol. 64, Pg. 287, 1961.
Link to PubMed
rat LD50 oral > 2gm/kg (2000mg/kg) Merck Index. Vol. 11, Pg. 864, 1989.

SECTION 12: Ecological information

Toxicity
May cause adverse effects in the aquatic environment.

Persistence and degradability
Not available for this mixture.

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil

Not available for this mixture.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with local authority guidelines. Empty containers may hold hazardous residual product.

Other disposal recommendations
Do not incinerate closed containers.

SECTION 14: Transport information

UN Number	1986
Hazchem emergency action code (EAC)	2WE
UN Proper Shipping Name	Alcohol, Flammable, Toxic, N.O.S
Transport hazard class(es)	3, Sub Class 6.1
Packing group	II

Special precautions for user
Flammable Liquids and subsidiary Division 6.1 Toxic Substances are incompatible in a placard load with any of the following: - Class 1- Explosives - Division 2.1, Flammable Gases, if both the Class 3 and Division 2.1 dangerous goods are in bulk - Division 2.3, Toxic Gases - Class 3 - If Class 3 is Nitro-methane - Division 4.2, Spontaneously Combustible Substances - Division 5.1, Oxidising Agents - Division 5.2, Organic Peroxides - Class 7 - Radioactive Substances - Class 8 - Corrosive Substances (if the dangerous goods are cyanides and the Class 8 dangerous goods are acids) And are incompatible with food and food packaging in any quantity.

SECTION 15: Regulatory information

Chemical Safety Assessment
- Poison Schedule: S6
- TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day week.
- STEL (Short Term Exposure Limit): The average airborne concentration over a 15-minute period which should not be exceeded at any time during a normal eight-hour workday.

SECTION 16: Other information

Further information/disclaimer
This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information
References
1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Can print: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).