Materials Safety Data Sheet

Reference No. 1202

Issue: 7th November 2007 Revision: 4th June 2013

1. Chemical product and company identification

Product name PACKTEST Tannin in Green Tea [10 Tests Package] Model ZAK-RC

Company name KYORITSU CHEMICAL-CHECK Lab., Corp.

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Recommended uses and restrictions Reagent for water quality measurement

2. Hazards identification

Most important hazards information: Irritation

It's effects: Harmful if inhaled or ingested. Contact with eyes, skin and mucous causes irritation.

Long-term exposure may cause discomfort feeling, nausea or headache.

[GHS Classification]

Physical hazards: Classification not possible (no data for GHS classification available)

Health hazards: Not classified or classification not possible (no data for GHS classification available)

Environmental hazards: Classification not possible (no data for GHS classification available)

[GHS labeling elements]

None

[Signal word]

None

[Hazard statements]

None

[Precautionary statements]

Keep out of reach of children and store in the cool, dry, and dark place.

Carefully read instructions before use and do not use for other purposes.

Wear personal protective equipment if necessary.

Do not inhale reagent.

Wash contaminated clothing.

Wash hands well before and after handling.

Avoid release to the environment.

3. Composition/information on ingredients

Discrimination of single substance or mixture: Mixture

Reagent name	K-1 reagent				
Chemical name	Iron(II) sulfate heptahydrate	Potassium sodium (+)-tartrate tetrahydrate	Buffering agent	Other ingredient	Polyethylene
Content	<0.1%	< 1%	<5%	<5%	>88.9%
Chemical formula	FeSO ₄ • 7H ₂ O	C ₄ H ₄ O ₆ KNa· 4H ₂ O	-	-	(C ₂ H ₄) _n
METI No. (reference number under CSCL in Japan)	(1)-359	(9)-530 (2)-1457	-	-	(6)-1
CAS No.	7782-63-0	6381-59-5		-	9002-88-4

4. First-aid measures

If reagents or test solutions;

Enter in eyes: Immediately rinse eyes thoroughly.

Contact with skin: Immediately wash out contaminated site with plenty of water.

Enter into mouth: Immediately rinse mouth with plenty of water.

If ingested or in case any symptoms appear after above measures, immediately get medical advice or treatment.

5. Fire-fighting measures

Extinguishing methods: Cut off ignition sources and extinct by a suitable media.

Suitable extinguishing media: Water (mist), powder, carbon dioxide, dry sand.

6. Accidental release measures

In case of outdoor use: Avoid spill of reagent or waste solution.

In case of indoor use: If spilled on a table or floor, wipe off immediately spilled reagent and dispose of them.

7. Handling and storage

Handling: Care should be made so that reagents and test solutions will not contact with eyes and skin and to avoid

ingestion.

Especially for outdoor use, ensure to bring back reagents, waste solutions after the measurement and used

containers.

Storage: Avoid direct sunlight and store in a well-ventilated, dark, dry and cool place.

8. Exposure controls and personal protection

Administrative control level

Working environment standard: Not established

Occupational exposure limits

Japan Society for Occupational health: Not established

ACGIH (TLVs): TWA 1 mg (Fe)/m³ (only for Iron(II) sulfate heptahydrate)

OSHA (PEL): Not established

Protective equipment: Recommended to wear protective glasses and gloves

9. Physical and chemical properties

Physical state: Tube containing powder reagent

1.1 g x 10 tubes/kit, aluminum laminated packaging each of 5 tubes

Color: Orange color (powder), semi-transparent (polyethylene tube)

Odor: No odor

pH: 7

Melting point, boiling point, flash point, ignition point, lower explosion limit, vapor pressure, density, relative density, solubility, Pow, kinetic viscosity: not available as a mixture.

10. Stability and reactivity

Avoid leaving in a place where high temperature, humid or under direct sunlight. Stable under normal use conditions and no dangerous reactions under specific conditions are expected. No information on hazardous decomposition product is available.

11. Toxicological information

No data on mixture is available. Data on each substance are shown.

Iron(II) sulfate heptahydrate:

Acute toxicity: Oral-rat LDLo = 1,389 mg/kg, Oral-mouse LD $_{50}$ = 1,520 mg/kg, Intraperitoneal-mouse LD $_{50}$ = 245 mg/kg, Intravenous injection-mouse LD $_{50}$ = 51 mg/kg (RTECS) Other data: Not available

Potassium sodium (+)-tartrate tetrahydrate:

No data on heath hazard is available.

Polyethylene:

Acute toxicity:

Oral: Rat LD₅₀ > 7,950 mg/kg (used 7,950 mg/kg for the calculation of ATEmix below)

Carcinogenicity: IARC Group 3 (not classifiable as to carcinogenicity to humans).

Other data: Not available

GHS classifications as a mixture are shown below.

[Acute toxicity]

Not classified based on application of the additive equation of Oral-LD₅₀ values (rat) of each ingredient.

[Skin corrosion/ irritation], [Serious eye damage/ eye irritation], [Respiratory or skin sensitization], [Germ cell mutagenicity], [Carcinogenicity], [Reproductive toxicity], [Specific target organ toxicity (single exposure)], [Aspiration hazard] Above classifications are not possible because of lack of data.

12. Ecological information

No data on mixture is available. Data on each substance are shown.

Iron(II) sulfate heptahydrate, Potassium sodium (+)-tartrate tetrahydrate and Polyethylene: No eco-toxicological information available.

GHS classifications as a mixture are shown below.

[Hazardous to the aquatic environment acute], [Hazardous to the aquatic environment chronic] Above classifications are not possible because of lack of data.

13. Disposal considerations

Always dispose of in accordance with local regulations.

14. Transport information

In addition to precautionary measures regarding handling and storage, avoid rough handling so as not to break containers. It is recommended to ship by air because under high temperature for long period may lead to deterioration.

UN classification and number: Not applicable Civil Aeronautics Act: Not applicable Poisonous and Deleterious Substances Control Act:

Not applicable

Fire Service Act: Not applicable Total weight of the product: 60 g/kit

15. Regulatory information

PRTR Act: Not applicable Industrial Safety and Health Act: Not applicable

16. Other information

Reference literature

15,911 Kagaku Shouhin, The Chemical Diary Co., Ltd. (2011)

Material Safety Data Sheet No.JW090108, Wako Pure Chemical Industries, Ltd. (2008.10.15)

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Material Safety Data Sheet No.051110033, TOSOH CORPORATION (2004.07.09)

Koukuu Kikenbutsu Yusou Houreisyu, Ed. MLIT, HOUBUN SHORIN CO., LTD. (2009)

JIS Z 7250:2005 Safety data sheet for chemical products - Part 1: Content and order of sections (Japan Industrial Standards Committee)

JIS Z 7251:2006 Labeling of chemicals based on GHS (Japan Industrial Standards Committee)

JIS Z 7252:2009 Classification of chemicals based on "Globally Harmonized System of Classification and Labeling of Chemicals (GHS)" (Japan Industrial Standards Committee)

UN GHS (tentative translation, second revised version), GHS Kankei Syocho Renraku Kaigi (2007)

Training text of GHS classification of mixture (chemical substance) (revised version) Japan Industrial Safety & Health Association (2006)

Hiroshi JONAI, GHS No Chosen, International Standard of hazardous information on chemicals, The Chemical Diary Co., Ltd. (2006)

International Chemical Safety Cards (ICSC) – Japanese Version-: http://www.nihs.go.jp/ICSC/ (2006)

NITE, Chemical Management Field, Chemical Risk Information Platform:

http://www.safe.nite.go.jp/japan/sougou/Top.do (2008)

NOTE) This information is not always exhaustive and use with care.

This data sheet only provides information but any description cannot be warranted.

Descriptions may possibly be changed because of new findings or modification of the current knowledge.

Precautions only cover normal handling.

This English MSDS is prepared in the cooperation with the Chemical Evaluation and Research Institute (CERI), Japan.