Safety Information-
Liquid-based, optical reference material UV506, UV512, UV518, UV524, UV536, UV548

1. Manufacturer and product information

Reference material type: UV506, UV512, UV518, UV524, UV536, UV548

Manufacturer: Hellma GmbH & Co. KG
Klosterrunsstr. 5
79379 Müllheim
GERMANY

Telephone: +49 7631 182-0

Safety information compiled on
22th November 2019
by Vanessa Hochhuth

2. Possible dangers

As this liquid-based, optical reference material involves a product and not a dangerous substance, the following information should be regarded as a voluntary customer service.

Hellma optical reference materials are permanently sealed and ready to use. They are regarded as a product according to Article 3 Para. 3 REACH regulation as it is not the chemical composition but the form, surface and design of the optical reference material that is decisive for its function. Accordingly, these optical reference materials do not need to be handled as dangerous substances. In normal use, the user will not come into contact with or be exposed to the substances sealed in the optical reference material unless the cells break. In this case, please see point 4, "First aid in case of incorrect use".

3. Composition

This optical reference material contains less than 3 mL niacin (nicotinic acid) solution (concentrations see table below) in a watery solution of hydrochloric acid (0,1 M HCl).

Filter	Concentration niacin $C_6H_5NO_2$
UV506	6 mg/L
UV512	12 mg/L
UV518	18 mg/L
UV524	24 mg/L
UV536	36 mg/L
UV548	48 mg/L

4. First aid in case of incorrect use

In normal circumstances no special measures need to be taken when using the optical reference material. The liquids are permanently sealed in the quartz glass cells. If, however, the cell does break, avoid all contact with the contents. Each optical reference material contains less than 3 mL liquid. If the cell breaks, carefully wipe away the contents with water and dispose correctly.
If, despite all efforts, you still come into contact with the contents of the optical reference material, observe the following measures:

Inhalation: Fresh air. When symptoms persist, seek medical advice.
Swallowing: Rinse mouth. Do not induce vomiting. Drink plenty of water. Seek medical help.
Skin contact: Wash with plenty of water. Remove moistened clothing. Seek medical help.
Contact with eyes: Rinse with plenty of water for at least 15 minutes. Seek medical help.

5. Firefighting measures

Due to the minimal volume of the optical reference material, the contents will not increase the danger in case of a fire. The content of the optical reference material is not flammable. Special firefighting measures do not need to be taken.

6. Measures in case of unintentional leakage

The liquids are permanently sealed in quartz glass cells. If, however, the cells break, you should avoid any contact with the contents. Each optical reference material contains less than 3 mL liquid. Carefully wipe away the contents with water and dispose correctly.

7. Handling and storage

The optical reference materials are made of quartz glass and accordingly should be carefully handled to avoid breakage of the cells. Liquid-based, optical reference material may only be touched on the frosted sides or on the cap. Soiling of the optical surfaces leads to altered values which lead to a recertification of the optical reference material. The same applies to scratches in the optical surfaces.
When the optical reference materials are not in use they should be stored in a dust-free place at temperatures of 15 - 30°C, rel. humidity non-condensing, away from light in their original closed case.
The optical reference materials should not be stored at temperatures below 4° C as the cells may crack or break if the contents freezes and expands. This should be particularly observed during transport (e.g. sending in for re-calibration)!

8. Personal protective clothing

In normal use, protective clothing is not necessary. If the content of the optical reference material needs to be disposed of due to cell breakage use protective gloves and safety goggles.

9. Physical and chemical properties

Appearance:	colourless, clear liquid permanently sealed in a quartz glass cell, content <3 mL
Boiling point:	ca. 100°C
Density:	ca. 1 g/cm^3
Water solubility:	soluble

10. Stability and reactivity

Stable under the conditions mentioned above.

11. Toxicology information

Risk of chemical burns to skin and eyes.

12. Environmental information

In normal use this optical reference material poses no risk to the environment. If the cell breaks, the content should be disposed of according to official regulations. The solution should not enter the drainage system or groundwater.

13. Disposal instructions

These optical reference materials should not be disposed of in household waste. If you are unable to dispose of the optical reference material according to the official regulations, you can return them to Hellma who will correctly dispose of them for you, free of charge.

14. Transport regulations

None

15. Labelling of dangerous substances

As this optical reference material involves a product according to Article 3 Para. 3 REACH regulation and is not a dangerous substance, it does not need to be labelled according to GefStoffV (Hazardous Substances Ordinance). However, please observe standard safety procedures when handling chemicals.

16. Other information

None

Disclaimer:

This safely information is provided voluntarily by Hellma GmbH & Co. KG and does not serve as a safety information leaflet in the sense of the GefStoffV.

This information has been carefully compiled and checked according to sound knowledge and reliable information. However, no liable will be assumed – neither expressed nor implied – for the completeness, correctness or up to datedness of the provided information. Liability for damage

resulting from the use or non-use of the provided information is – in so far as this is legally permitted – excluded.

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Safety Information-
Liquid-based, optical reference material UV599

Manufacturer and product information

Reference material type:	UV599
Manufacturer:	Hellma GmbH & Co. KG Klosterrunsstr. 5 79379 Müllheim GERMANY
Telephone:	+49 7631 182-0
Safety information compiled on	30th August 2019 by Vanessa Hochhuth

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2. Composition

This optical reference material contains less than 3 mL of a watery solution of hydrochloric acid (0,1 M HCl).

3. First aid in case of incorrect use

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6. Handling and storage

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