

Product description

Test stripes for ninhydrin/ DFO/ indandione/ zinc

Designation: Test100
Article-No.: 8070.100
Dimensions: ca. 60mm x 25mm
Unit: 100 pieces

Field of application:

Test stripes for ninhydrin/DFO/ indandione/ zinc to check the functionality of the applied evidence collection procedure.

Material:

Paper strips consisting of absorbent material with a substance containing amino acids printed on them in various concentrations (1/10, 1/100, 1/1000, 1/10000).

Composition of the amino acid solution used

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Testspurenträger für Ninhydrin/ DFO / Indandione-Zink			
<u>Zusammensetzung der verwendeten Aminosäurelösung ab 2013</u>			
Aminosäure	g/mol	Molares Verhältnis zu Serin	Gew. Anteil
Serin	105,09	1,00	34%
Glycin	75,07	0,82	20%
L-Lysine monohydrochlorid	146,19	0,30	14%
Alanin	89,09	0,35	10%
L-Histidine	155,16	0,10	5%
Threonin	119,12	0,13	5%
Asparaginsäure	133,10	0,12	5%
Valin	117,15	0,08	3%
Leucin	131,18	0,07	3%
Summe			100%

Storage and shelf life of the test stripes

Test stripes can be stored in their original packaging in a dark environment, such as an office cabinet or drawer, at room temperature for at least approx. 2 years. During storage, high humidity and direct sunlight should be avoided.

Instructions for use

The substance DFO (1.8 Diazafluoren-9-one) and ninhydrin react to amino acids contained in human protein. Studies have shown that when DFO is used on documents, 2-3 times more latent prints are developed than with ninhydrin alone.

Ninhydrin is available commercially as a ready-to-use spray solution. The ready-to-use DFO-solution is freshly prepared.

The following solutions contain flammable chemicals. Therefore, special care must be taken when preparing, using, and storing the solutions. We recommend working under a laboratory fume hood and wearing protective gloves and clothing.

In any case, please observe the information in the safety data sheet for the developer chemicals for DFO and ninhydrin.



1. Preparation of the DFO-solution

0,5 g DFO dissolved in 40 ml methanol.

Then add 20ml of ice vinegar and fill up to with butylmethylether (or hydrofluorether) a total of 1000ml.

Abb. After DFO-treatment

2. Using of DFO

Dip the test stripes into the DFO-solution for approx. 10 seconds and, after approx. 3-5 minutes drying time, dip it into the solution again and allow it to dry for another 3-5 minutes. Experience has shown that dipping twice leads to better results. Then place the test stripes in a heating or drying cabinet at 100°C for approx. 10 minutes. The evaluation is carried out under a forensic light source or a laser.

Excitation wavelength/ nm: 450 - 570

Emission wavelength/ nm: 560 - 650

3. Storage of DFO-Solution

DFO solution in a dark glass bottle.

Storage time: approx. 2 - 3 weeks

4. Ninhydrin-Spray

Spray the test stripes with ninhydrin, allow to dry, and spray again. After drying, store the test stripes in a climate chamber at a relative humidity of 60-80% for approx. 24 hours. A temperature of approx. 50°C in the climate chamber accelerates the process.

5. Use of both substances DFO / ninhydrin

If both DFO and ninhydrin are to be used to treat a piece of evidence, treatment with DFO should be carried out first in order to achieve fluorescence. DFO does not fluoresce on an object that has already been treated with ninhydrin.

