



## 2E-066

Orange OG 6, Papanicolaou  
In-vitro diagnostic agent

### Description

Orange OG 6, Papanicolaou is a ready-to-use solution for professional use in cytology for staining specimen material.

The product comes in 5 different pack sizes: 2E-066.00100 (100ml bottle), 2E-066.00250 (250ml bottle), 2E-066.01000 (1l bottle), 2E-066.05000 (5l canister). and 2E-066.10000 (10l canister).

### Main components

Distilled /deionised water (CAS no.: 7732-18-5)	100ml
Orange G (C.I.: 16230) (CAS no.: 1936-15-8)	1.9g/l
Phosphomolybdic acid (CAS no.: 51429-74-4)	0.1g/l
Ethanol 96% denatured (CAS no.: 64-17-5)	650ml
Methanol (CAS no.: 67-56-1)	250ml

### Purpose

Papanicolaou staining (PAP staining) is mainly used in gynaecological cytology for carcinoma diagnosis, but non-gynaecological samples can also be examined cytologically using this staining method. This is a polychrome staining that requires other dyes besides Orange G 6.

### Sample material and sample preparation

Samples may only be taken by qualified personnel. All samples must be processed with state-of-the-art technology. All samples must be clearly labelled.

Starting material for the staining are samples from smears, fine needle biopsies, rinsing fluids, sputum or urine. Fixation takes place immediately after removal with an alcoholic fixative.

### Test principle

In principle, staining according to Papanicolaou consists of nuclear staining and polychrome cytoplasmic staining.

Haematoxylin is used for nuclear staining. Cytoplasm staining is carried out in a first step with Orange G 6, Papanicolaou, which stains keratinised squamous epithelial cells, in particular. The second and last step of the plasma staining is done with the use of a polychrome solution of eosin, light green and bismarck brown. This enables differentiated visualisation of mature and immature squamous cells.



### Staining

In addition to Orange OG 6, Papanicolaou, haematoxylin and polychrome solution are needed for staining.

Nuclear staining can be done progressively or regressively. Regressive staining involves prolonged staining ("overstaining") with haematoxylin, followed by decolourisation or differentiation with acidic solution. Staining is done to the end point for progressive staining. Both times, the bluing is done with tap water.

The usual staining protocols known from literature must be used.

Staining may only be carried out by qualified personnel.

### Result

#### Cytoplasm

-basophil (immature epithelial cells):	blue-green
-acidophil (mature epithelial cells):	red-orange
- eosinophil:	red

Nuclei:	blue/dark purple
Erythrocytes:	red
Bacteria:	grey-blue
Trichomonads:	grey-green

### Precautionary measures

When removing the product, care must be taken to avoid contamination of the storage vessel. Once the solution has been removed, it must not be returned to the canister. If turbidity or solids appear, discard the product. The product is intended for single use and must not be reused.

### Storage and shelf life

Store the unopened containers in a dry place at 15 to 25 °C, avoiding direct sunlight.

The shelf life is 2 years. See also the best-before date (BBD) on the label. Once the containers have been opened, the shelf life corresponds to the best-before date, as long as the storage conditions are observed and the solution is handled properly.

### Safety notice

If any serious incidents occur in connection with the product, please report them to the manufacturer and the national authority.

### Literature

Kern, Carcinoma in situ - Vorstadium des Gebärmutterhalskrebses Grundlagen und Praxis, 1964, Springer Berlin Heidelberg