

## Kit RAL Stainer 555, slide counting

REF. 360255-0000

Fixation and differential staining of cellular structures



IFU057B-RAL

For professional use only.

Please read all information carefully before using this device.

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### Intended Use

Kit RAL Stainer 555, slide counting is intended to be used in combination with the RAL Stainer instrument for the fixation and the differential staining of biological samples and cellular structures prior microscopic examination.

If applicable, RAL Diagnostics recommends using the associated RAL Diagnostics products and cannot guarantee that the expected results will be achieved if used in combination with products of other brands.

### Principle

The staining by Kit RAL Stainer 555 is a fast-acting variation of May-Grünwald Giemsa (MGG) staining. This product acts in buffered aqueous medium and allows a cytological study or microorganisms detection. The analysis of the staining is identical to that carried out with standard MGG staining.

## Kit description

### FIX-RAL 555

Clear purple solution  
REF. 362870-0200

1 X 200 mL

### EOSIN-RAL 555

Clear orange red solution  
REF. 361640-0200

1 X 200 mL

### BUFFER-RAL 555

Clear colorless solution  
REF. 361645-0200

1 X 200 mL

### BLUE-RAL 555

Clear dark blue solution  
REF. 361650-0200

1 X 200 mL

For a specific batch, refer to the analysis certificate of the batch available at [my.ral-diagnostics.fr](http://my.ral-diagnostics.fr).

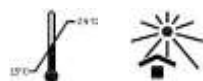
## Storage

Storage temperature: 15-25°C away from light.

Bottle shelf life before opening: refer to the expiry date on the label.

Bottle shelf life after opening: 2 weeks or 300 slides.

Once opened, the duration of use overrules the expiry date



## Active components

### FIX-RAL 555

Methanol - CAS 67-56-1: >80%

### EOSIN-RAL 555

Eosin Y- CAS 17372-87-1: <0.1%

A mixture of 5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1) – CAS 55965-84-9: ≤0.005 %

### BUFFER-RAL 555

Potassic mono phosphate - CAS 7778-77-0: ca 1%

Anhydrous disodic phosphate - CAS 7558-79-4: ca 2%

A mixture of 5-chloro-2-methyl-2H-isothiazol-3-one [EC No 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC No 220-239-6] (3:1) – CAS 55965-84-9: ≤0.005 %

### BLUE-RAL 555

Methylene blue – CAS 61-73-4: < 0.1%

## Hazard classification and safety information

### FIX-RAL 555

Danger: H225 - Highly flammable liquid and vapour. H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled. H370 - Causes damage to organs.



P210 - Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. P261 - Avoid breathing vapours. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. P308+P311 - IF exposed or concerned: Call a POISON CENTER or doctor.

|      |       |
|------|-------|
| CONT | CH3OH |
|------|-------|

### EOSIN-RAL 555

Warning: H317-May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.



P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P280 - Wear protective clothing, protective gloves, eye protection. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

|      |  |
|------|--|
| CONT | 5-chloro-2-methyl-2H-isothiazol-3-one/<br>2-methyl-2H-isothiazol-3-one |
|------|--|

### BUFFER-RAL 555

Warning: H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.



P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P280 - Wear protective gloves, protective clothing, eye protection. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

|      |  |
|------|--|
| CONT | 5-chloro-2-methyl-2H-isothiazol-3-one/<br>2-methyl-2H-isothiazol-3-one |
|------|--|

### BLUE-RAL 555

No labelling applicable

The RFID label used is a passive short-range contactless memory chip (13,56MHz).

## Personnel qualification

All samples and products must be handled by qualified and authorized personnel, using individual or collective protection, in accordance with the national directives in force in the laboratories. Personnel must also be aware of the classification of hazardous materials indicated on the label and the safety data sheet (available at [my.ral-diagnostics.fr](http://my.ral-diagnostics.fr)).

The specimen must be treated in accordance with procedures available in the laboratory and required by national authorities.

The diagnosis must be conducted by qualified and authorized personnel, in accordance with the procedures in force within the laboratory.

## Specific equipment and reagents required but not provided

Microscope slides, absolute ethanol, 90° ethanol, isopropanol and this following RAL Diagnostics device:  
RAL Stainer REF. 405000

This equipment may vary depending on the protocol. Please refer to the relevant protocol (see the section operating procedure) to ensure that you have the necessary equipment to carry out tests.

### Operating procedure

The equipment used for sample processing must comply with the supplier's instructions for use.

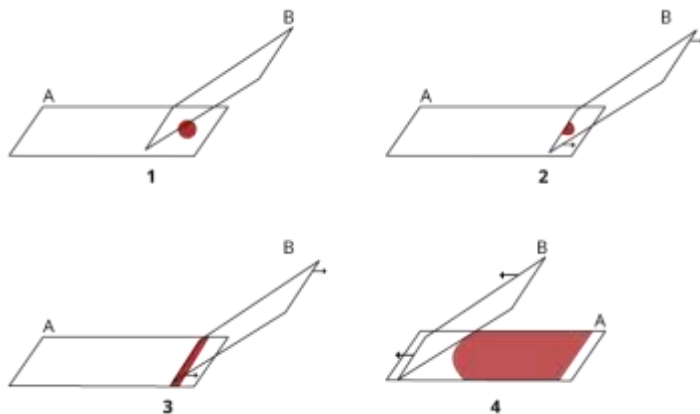
### Sample preparation

The following examples are for hematological and bacterial sample preparations, specimen must treat in accordance with procedures available in the laboratory and promulgated by national authorities.

**Manual blood smear:** Mix the tube by slow inversion and install a smearing droplet device. Invert the tube and lightly press the drop depositor onto a slide to deposit a small drop of blood (Fig. 1- slide A at step 1).

Using another slide tilted at 45° (Fig. 1- slide B at step 1), spread the blood by capillarity on the short edge (Fig. 1- steps 2 & 3) using a pushing motion (Fig. 1- step 4). A good quality smear does not reach the end of the slide and has a gradual decrease in thickness until the end is feathered. Allow the smear to air dry before fixing or staining.

NB: if you do not have a smearing droplet device, open the tube, and use a pipette to deposit a blood drop.



**Figure 1. Schematic representation of performing a blood smear**

A & B: slides, 1 – 4: steps 1 to 4

**Manual bone marrow smear by crushing method:** using a pipette deposit, a small amount of the sample on a microscope slide. Blot up blood excess to keep only shiny lumps. Cover the first slide with a slide. Squeeze and thin the sample by sliding and stretching to the end of the slide. A good quality smear does not reach the end of the slide. Discard the slide used for smearing. Allow the smear to air dry before fixing or staining.

**Thick blood smear:** take 2 µL of blood out of an EDTA tube and place them in the center of a slide. Spread the drop in a circle with the corner of another slide. Allow it to dry for 20 minutes in the open air or for 5 minutes in an incubator or for 2 minutes under a hair dryer. Cover the drop with very little tap water to hemolyze it. Once the hemoglobin has spread, get rid of the red water just inclining the slide. Rinse the drop very gently with tap water. The drop the gets a whitish appearance.

**Manual bacterial smear:** made a thin film of bacteria sample and leave the slide to dry at room temperature. Then bacterial smear can be fixed with mild heat source (Bunsen burner or hot plate) or chemically fixed with chemical fixative (methanol, ethanol, acetic acid, or formalin...)

**NB: Never pass through the flame a smear that is not entirely dry, this could cause cracklings and dissemination of bacteria (creation of aerosols).**

If necessary, the two fixations can be combined.

### Reagents and instruments preparation

No preparation needed. The solutions are ready to use and the reagents containers have been designed to be used for slides staining.

Place the 4 bottles labelled 1 to 4 in their respective set position and remove the caps and security rings.

The usual rinsing liquid for staining, validated by the laboratory, can be tap water, demineralized water, etc. Only de-ionized water is deprecated because it can cause a dysfunctionment of the RAL Stainer level sensor.

### Protocols

The staining steps of the protocols indicated below consist of a successive dipping of the slides in the different staining baths.

An assortment of staining settings, recommended by RAL Diagnostics, are pre-set in the RFID tag.

#### ***Protocol for blood smear staining - Automated bath method- Manual microscopic analysis (initial settings)***

Processing time: 32 s

| Steps | Reagent        | Time [mm: ss] | Indications    |
|-------|----------------|---------------|----------------|
| Fix   | FIX-RAL 555    | 00: 07        | With agitation |
| Stain | EOSIN-RAL 555  | 00: 07        |                |
| Rinse | BUFFER-RAL 555 | 00: 01        |                |
| Stain | BLUE-RAL 555   | 00: 07        |                |
| Rinse | Rinsing liquid | 00: 10        |                |
| Dry   | No             | 02: 00        | No             |

#### ***Protocol for medullary smear staining - Automated bath method - Manual microscopic analysis***

Processing time: 3 min 11s

| Steps | Reagent        | Time [mm: ss] | Indications       |
|-------|----------------|---------------|-------------------|
| Fix   | FIX-RAL 555    | 01: 00        | Without agitation |
| Stain | EOSIN-RAL 555  | 01: 00        | Without agitation |
| Rinse | BUFFER-RAL 555 | 00: 01        | With agitation    |
| Stain | BLUE-RAL 555   | 01: 00        | Without agitation |
| Rinse | Rinsing liquid | 00: 10        | With agitation    |
| Dry   | No             | 02: 00        | No                |

#### ***Protocol for Plasmodium research in thick drop - Automated bath method - Manual microscopic analysis***

Processing time: 22 s

| Steps | Reagent        | Time [mm: ss] | Indications       |
|-------|----------------|---------------|-------------------|
| Fix   | FIX-RAL 555    | 00: 01        | Without agitation |
| Stain | EOSIN-RAL 555  | 00: 05        | With agitation    |
| Rinse | BUFFER-RAL 555 | 00: 01        |                   |
| Stain | BLUE-RAL 555   | 00: 05        |                   |
| Rinse | Rinsing liquid | 00: 10        |                   |
| Dry   | No             | 02: 00        | No                |

#### ***Protocol for Plasmodium research in thin smear - Automated bath method - Manual microscopic analysis***

Processing time: 1 min 19 s

| Steps | Reagent        | Time [mm: ss] | Indications       |
|-------|----------------|---------------|-------------------|
| Fix   | FIX-RAL 555    | 01: 00        | Without agitation |
| Stain | EOSIN-RAL 555  | 00: 04        | With agitation    |
| Rinse | BUFFER-RAL 555 | 00: 01        |                   |
| Stain | BLUE-RAL 555   | 00: 04        |                   |
| Rinse | Rinsing liquid | 00: 10        |                   |
| Dry   | No             | 02: 00        | No                |

**Protocol for staining of tissular Protozoa (Leishmania, Toxoplasma, Microsporidiosis), Cryptosporidium, Pneumocystis carinii, fungi contributing to deep Mycosis - Automated bath method - Manual microscopic analysis**

Processing time: 2 min 16 s

| Steps | Reagent        | Time [mm: ss] | Indications       |
|-------|----------------|---------------|-------------------|
| Fix   | FIX-RAL 555    | 01: 00        | Without agitation |
| Stain | EOSIN-RAL 555  | 00: 25        |                   |
| Rinse | BUFFER-RAL 555 | 00: 01        |                   |
| Stain | BLUE-RAL 555   | 00: 40        | With agitation    |
| Rinse | Rinsing liquid | 00: 10        |                   |
| Dry   | No             | 02: 00        | No                |

**Protocol for veterinary parasitology (Piroplasmosis, M.pachydermatis) - Automated bath method - Manual microscopic analysis (initial settings)**

Processing time: 32 s

| Steps | Reagent        | Time [mm: ss] | Indications    |
|-------|----------------|---------------|----------------|
| Fix   | FIX-RAL 555    | 00: 07        | With agitation |
| Stain | EOSIN-RAL 555  | 00: 07        |                |
| Rinse | BUFFER-RAL 555 | 00: 01        |                |
| Stain | BLUE-RAL 555   | 00: 07        |                |
| Rinse | Rinsing liquid | 00: 10        | No             |
| Dry   | No             | 02: 00        |                |

**Protocol for Trichomonas research - Automated bath method - Manual microscopic analysis**

Processing time: 2 min 26 s

| Steps | Reagent        | Time [mm: ss] | Indications       |
|-------|----------------|---------------|-------------------|
| Fix   | FIX-RAL 555    | 00: 15        | Without agitation |
| Stain | EOSIN-RAL 555  | 01: 00        | Without agitation |
| Rinse | BUFFER-RAL 555 | 00: 01        | With agitation    |
| Stain | BLUE-RAL 555   | 01: 00        | Without agitation |
| Rinse | Rinsing liquid | 00: 10        | With agitation    |
| Dry   | No             | 02: 00        | No                |

**Protocol for Microfilaria research - Automated bath method - Manual microscopic analysis**

Processing time: 56 s

| Steps | Reagent        | Time [mm: ss] | Indications                                 |
|-------|----------------|---------------|---|
| Fix   | FIX-RAL 555    | 00: 15        | With agitation                              |
| Stain | EOSIN-RAL 555  | 00: 15        |   |
| Rinse | BUFFER-RAL 555 | 00: 01        |   |
| Stain | BLUE-RAL 555   | 00: 15        | With agitation, can be extend to 30 seconds |
| Rinse | Rinsing liquid | 00: 10        | With agitation                              |
| Dry   | No             | 02: 00        | No  |

**Protocol for cyto-bacteriology of urines fluids - Automated bath method - Manual microscopic analysis (initial settings)**

Processing time: 32 s

| Steps | Reagent        | Time [mm:ss] | Indications    |
|-------|----------------|--------------|----------------|
| Fix   | FIX-RAL 555    | 00: 07       | With agitation |
| Stain | EOSIN-RAL 555  | 00: 07       |                |
| Rinse | BUFFER-RAL 555 | 00: 01       |                |
| Stain | BLUE-RAL 555   | 00: 07       |                |
| Rinse | Rinsing liquid | 00: 10       |                |
| Dry   | No             | 02: 00       | No             |

**Protocol for cytology of punctions (breast and deep organs), effusion liquids of the serous membrane - Automated bath method - Manual microscopic analysis (initial settings)**

Processing time: 32 s

| Steps | Reagent        | Time [mm:ss] | Indications    |
|-------|----------------|--------------|----------------|
| Fix   | FIX-RAL 555    | 00: 07       | With agitation |
| Stain | EOSIN-RAL 555  | 00: 07       |                |
| Rinse | BUFFER-RAL 555 | 00: 01       |                |
| Stain | BLUE-RAL 555   | 00: 07       |                |
| Rinse | Rinsing liquid | 00: 10       |                |
| Dry   | No             | 02: 00       | No             |

**Protocol for cyto-bacteriology of cerebrospinal fluid (CSF) - Automated bath method - Manual microscopic analysis**

Processing time: 1 min 19 s

| Steps | Reagent        | Time [mm:ss] | Indications       |
|-------|----------------|--------------|-------------------|
| Fix   | FIX-RAL 555    | 01: 00       | Without agitation |
| Stain | EOSIN-RAL 555  | 00: 04       | With agitation    |
| Rinse | BUFFER-RAL 555 | 00: 01       |                   |
| Stain | BLUE-RAL 555   | 00: 04       |                   |
| Rinse | Rinsing liquid | 00: 10       |                   |
| Dry   | No             | 02: 00       | No                |

**Protocol for fixed and paraffined tissues sections staining - Automated bath method - Manual microscopic analysis (initial settings)**

Dewax and et hydrate tissues sections in appropriate reagents before staining on RAL Stainer. Do not dip slides in the FIX-RAL 555 solution.

Processing time: 24 s

| Steps                | Reagent         | Time [mm:ss] | Indications   |
|----------------------|-----------------|--------------|---|
| Fix                  | FIX-RAL 555     | 00: 00       | Do not use  |
| Stain                | EOSIN-RAL 555   | 00: 05       | Without agitation   |
| Rinse                | BUFFER-RAL 555  | 00: 01       | With agitation  |
| Stain                | BLUE-RAL 555    | 00: 07       | Without agitation   |
| Rinse                | Rinsing liquid  | 00: 10       | With agitation  |
| Dry                  | No              | 00: 00       | No  |
| Differentiate        | 90° ethanol     | 00:01        | Can be extend to 2 seconds<br>Shake in the reagent until gets the wished tint |
| Stop differentiation | Isopropanol     | No           |   |
| Mount                | Mounting medium | No           |   |

**Protocol for Helicobacter pylori research - Automated bath method - Manual microscopic analysis (initial settings)**

Dewax and et hydrate tissues sections in appropriate reagents before staining on RAL Stainer. Do not dip slides in the FIX-RAL 555 solution.

Processing time: 33 s

| Steps                | Reagent          | Time [mm:ss] | Indications       |
|----------------------|------------------|--------------|-------------------|
| Fix                  | FIX-RAL 555      | 00: 00       | Do not use        |
| Stain                | EOSIN-RAL 555    | 00: 07       | With agitation    |
| Rinse                | BUFFER-RAL 555   | 00: 01       | Without agitation |
| Stain                | BLUE-RAL 555     | 00: 05       | With agitation    |
| Rinse                | Rinsing liquid   | 00: 10       | Without agitation |
| Dry                  | No               | 00: 00       | No                |
| Differentiate        | 90° ethanol      | 00:10        | Dip and shake     |
| Stop differentiation | Absolute ethanol | No           | No                |
| Dehydrate            | Mounting medium  | No           | 2 baths           |
| Mount                | Mounting medium  | No           | No                |



## Expected results

### Blood or bone marrow smear

**Nuclei / chromatin:** +/- dense purple

**Leukocytes cytoplasm without RNA:** light pinkish

**Granulocytes eosinophilic granules:** orange- brown

**Granulocytes basophilic granules:** dark purplish-blue

**Granulocytes neutrophilic granules:** +/- intense purple

**Lymphocytes cytoplasm without RNA:** pure blue

**Lymphocytes cytoplasm without RNA:** light blue

**Lymphocytes azurophilic granules:** red

**Monocytes cytoplasm:** grey-blue

**Erythrocytes:** light red

**Platelets chromomere:** purplish -red

**Platelets Hyalomere:** bluish

**Blood parasites nucleus:** red

**Blood parasites cytoplasm:** blue

### Cyto-bacteriology

**Nuclei / chromatin:** ± dense purple

**Granulocytes cytoplasm without RNA:** light pinkish

**Eosinophilic granules:** orangey-brown

**Basophilic granules:** dark purplish-blue

**Neutrophilic granules:** ± intense purple

**Erythrocytes:** Beige

**Acidophilic cytoplasm:** pink

**Basophilic cytoplasm:** Blue

### Parasitology and Mycology

**Cytoplasm of host, fungic or parasitic eucaryot cells:** blue to dark blue, depending on the ribosomal richness.

**Nuclei:** purple red

### Helicobacter pylori on histological sections

**Helicobacter pylori:** dark blue

**Nuclei:** blue

**Cytoplasm:** pink to red

**Collagen:** very pale pink

### Histo-cytology

**Nuclei:** red violet

**Acidophilic cytoplasm:** pink

**Basophilic cytoplasm:** blue

**Collagen:** pale pink

**Erythrocytes:** beige

If observed results vary from those expected, please contact RAL Diagnostics technical service through your usual supplier for assistance.

## Performance

The efficacy of the Kit RAL Stainer 555 reagents was evaluated in a hospital laboratory with 301 clinical samples (respiratory sample, urines, stools, biopsies, fungal cartography etc.).

The sensitivity of the Kit RAL Stainer 555 reagents was evaluated in comparison with the routine laboratory's reference technique: MGG in bath. All tests were performed in parallel under the same conditions.

The results obtained in this study show that the efficiency of the Kit RAL Stainer 555 is equivalent to the MGG routine method.

To ensure product performance, use clean and dry laboratory equipment.

The laboratory is responsible for notifying the manufacturer and state competent authority of any serious incident relating to the use of the medical device.

## User quality Control

Users are responsible for determining the appropriate quality control procedures for their laboratory and complying with applicable laboratory regulations.

The following examples are for hematological and bacterial samples.

Hematological sample: RAL Diagnostics recommends staining a freshly made blood smear with a normal WBC count and no known abnormal pathology at reagent renewal and for the first staining cycle each day. Slides stained for quality control purposes should be checked to ensure that they are satisfactory for intended test (properly stained and free of precipitate).

Bacterial sample: RAL Diagnostics recommend using a known bacteria sample for reagents quality control at reagents renewal, for each staining cycle or at least for the first staining cycle if a stain is performed multiple times daily. The result is checked under a microscope, in comparison with the results obtained by the usual technique validated by the laboratory. Staining results must also be compliant with this manual expected results.

These quality control procedures should only be performed by qualified personnel.

## Other products

For more information contact your usual supplier.

## Recommendations, notes, and troubleshooting

### Products appearance

If the appearance of the products differs from the description above, do not use it and contact RAL Diagnostics technical service through your usual supplier for assistance.

### Procedures notes

To prevent products degradation, please comply with the storage and handling recommendations specified in this manual.

According to the thickness of the smears or the specimens on slides, it may be necessary to adjust staining times.

The FIX-RAL 555 contains methanol which is very hygroscopic, and must be therefore regularly refilled, namely in countries having high humidity. The color of EOSIN-RAL 555 solution may appear more or less dark, but the staining results are not affected either way. The oxidation level of BLUE-RAL 555 is standardized during manufacture, but this level varies over time and in transferring small quantities of eosin from bottle to bottle.

The usual rinsing liquid for staining, validated by the laboratory, can be tap water, demineralized water, etc. Only de-ionized water is deprecated because it can cause a dysfunction of the RAL Stainer level sensor. Decontamination of the rinsing container must be carried out according to the recommendations of the RAL Stainer operating manual.

### Products stability

Every RAL Diagnostics product can be used until the expiry date indicated on, in its original packaging if it is still hermetically sealed.

**Staining stability**

Staining quality and reproducibility depend on the correct use of the products. Staining conducted according to these recommendations will remain stable for several days. If it is necessary to store the stained smears for several months or years, RAL Diagnostics recommended mounting them with a coverslip, using a suitable mounting liquid and storing them in a light and dustproof container.

**Instructions for cleaning and waste disposal**

All biological samples, effluents and used consumables should be considered potentially hazardous.



To avoid any risk, apply the following instructions: dispose of samples, effluents and consumables in accordance with laboratory standards and applicable national and local standards and regulations.

Chemical and biological waste must be collected and processed by specialized, registered companies.

## Table of symbols and abbreviations

Depending on the product, you may find the following symbols on the device or the packaging material.

| GHS PICTOGRAMS | INTERPRETATION          | SYMBOL | INTERPRETATION  |
|----------------|-------------------------|--------|---|
|                | Explosive               |        | Batch code  |
|                | Flammable               |        | Serial number   |
|                | Oxidizer                |        | Catalogue reference   |
|                | Compressed gas          |        | Date of manufacture   |
|                | Corrosive               |        | Use up to   |
|                | Toxic                   |        | Unique device identifier  |
|                | Harmful                 |        | Manufacturer  |
|                | Health Hazard           |        | Importer  |
|                | Environmental Hazard    |        | Entity distributing the medical advice in the region concerned  |
|                | No labelling applicable |        | CE marking device   |
|                |                         |        | In vitro diagnostic medical device  |
|                |                         |        | Authorized Representative in the European Community   |
|                |                         |        | Authorized Representative in Switzerland  |
|                |                         |        | Complies with UK guidelines   |
|                |                         |        | Do not use if packaging is damaged  |
|                |                         |        | Keep away from light  |
|                |                         |        | Temperature limit: 15-25°C  |
|                |                         |        | Temperature limit: 15-30°C  |
|                |                         |        | Keep dry  |
|                |                         |        | Box: handling upwards   |
|                |                         |        | Fragile   |
|                |                         |        | Sterilised by irradiation   |
|                |                         |        | Single sterile barrier system with outer protective packaging   |
|                |                         |        | Sterile and radiation-sterilised barrier suit   |
|                |                         |        | Do not reuse  |
|                |                         |        | Do not re-sterilize   |
|                |                         |        | Contents sufficient for n tests   |
|                |                         |        | Hazardous material contained  |
|                |                         |        | Consult instructions for use  |
|                |                         |        | Use   |
|                |                         |        | After opening, use within XX months   |
|                |                         |        | The product must not be used in conjunction with an automatic colouring machine   |
|                |                         |        | Indicates a medical device that contains potentially carcinogenic, mutagenic or reprotoxic (CMR) substances, or substances classified as endocrine disruptors |

## Bibliography

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## Change tracking

| Date    | Version     | Changes                       |
|---------|-------------|-------------------------------|
| 05/2022 | IFU057A-RAL | IVDR (EU) 2017/746 compliance |
| 08/2022 | IFU057B-RAL | Protocol section correction   |



RAL Diagnostics - Site Montesquieu - 33650 Martillac - France  
T+33(0)5 57 96 04 04 - F +33 (0)5 57 96 04 55 - ral-diagnostics.fr / cellavision.com