

The complete DELFIA®



immunodiagnosics system

a complete set of reasons for choosing DELFIA®



DELFIA® products for population screening, clinical diagnostics and research are based on time-resolved fluorometry. In this, the unique fluorescence properties of lanthanide metals are utilized to form a measuring technology with many superior features.

Serving hospital, commercial and screening laboratories of all sizes and descriptions, our complete systems translate these features into solid user benefits. Wallac DELFIA® systems include all necessary instruments, reagents and computer software.

DELFIA® systems from PerkinElmer Life and Analytical Sciences are based on:

- Very high sensitivity
- Wide dynamic range
- No radioactive waste
- Stable tracers
- Complete, optimized instrumentation packages
- MultiCalc®, data management software
- Easy labelling procedure
- Mild coupling conditions to proteins
- Use of multiple labels
- Fully automatic performance of assays if desired



a complete range of assay types – and multilabelling

DELFI[®]A technology is both easy to use and easy to apply. The product range includes sandwich-type assays as well as competitive assays for routine clinical analytes. There is also a selection of research reagents, which allow users to build their own assays.

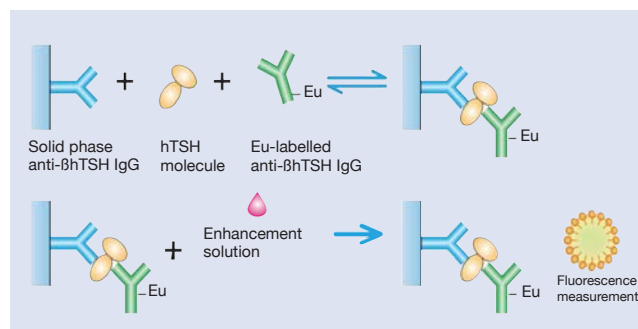
Most DELFIA assays involve use of europium chelate labels. These are characterized by a large Stokes shift, and a far longer decay time than conventional fluorophores. Measurement can thus be made at a wavelength and at a time where non-specific background fluorescence is minimal. DELFIA sandwich-type assays thus allow extremely high sensitivity and wide range of measurement.

In a typical sandwich-type DELFIA assay, for example measuring hTSH, samples are pipetted into antibody coated microtitration plates. Also pipetted is a reagent containing a second anti-hTSH antibody with a europium chelate label. After a short room temperature incubation on a shaker, a sandwich forms with hTSH molecules trapped and marked with the europium label.

Separation of the unbound tracer is performed as a simple wash stage. An enhancement solution is then

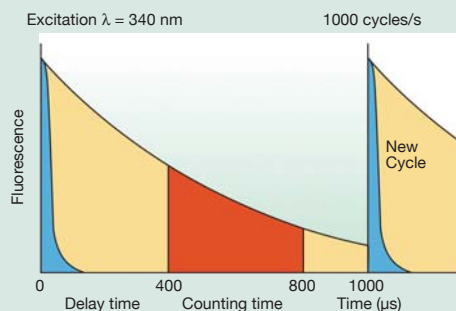
added to each well. This dissociates the europium and forms a new, highly fluorescent chelate which is measured using the VICTOR[™]_D Fluorometer. Fluorescence from this is proportional to the presence of the hTSH in the sample.

With the Wallac AutoDELFI[®]A automatic immunoassay system, all assay stages are performed automatically.



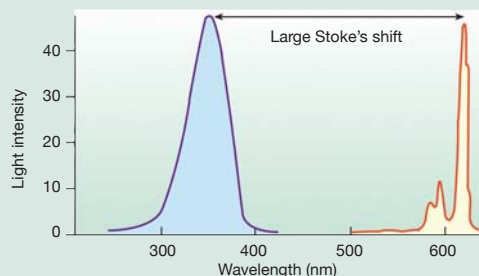
DELFI[®]A hTSH, an example of a DELFIA non-competitive sandwich type assay.

Signal resolution by time

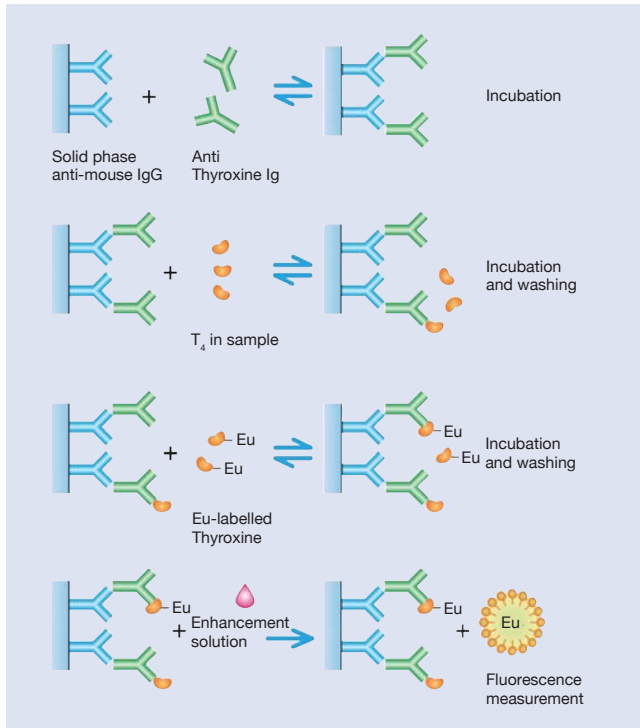


Europium chelates' fluorescence lasts 200,000 times longer than fluorescence from a conventional fluorophore. Time-resolved measurement starts only after non-specific background has died away.

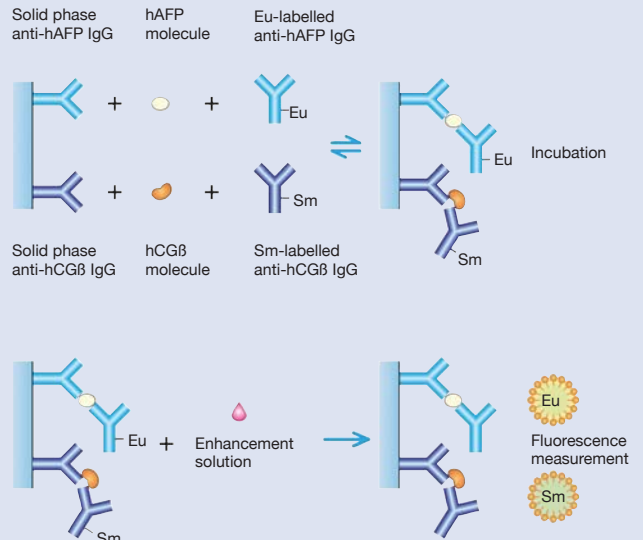
Signal resolution by wavelength



Europium chelates have far wider Stoke's shift than commonly used conventional fluorophores. This means that the wavelength of the emitted light is as much as 200-300 nm longer than that of the excitation light used.

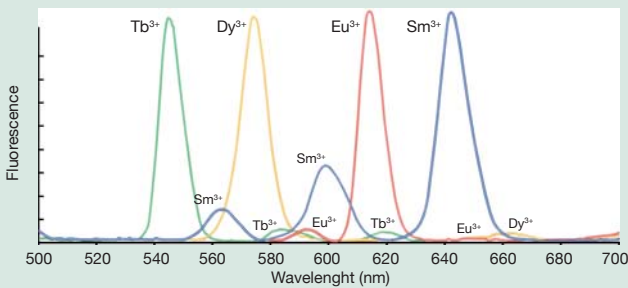


DELFIA T4, an example of a DELFIA competitive assay.



DELFIA hAFP/Free hCG β , employs two different lanthanide labels. Europium is used to label hAFP and samarium to label hCG β .

Four different labels



Narrow emission peaks and clear differences in wavelengths for four different lanthanides makes for cost-saving, convenient multi-label assays.

A special characteristic of the DELFIA technology is the facility to develop multianalyte assays involving up to four different lanthanide labels. Samarium, terbium and dysprosium, like europium, all of these form chelates with excellent fluorescence properties and clearly distinguishable emission windows.

complete panels



For all types of investigations, the unique DELFIA system gives an unbeatable combination of advantages. The many benefits are appreciated by clinicians, by patients and by laboratory staff of many of the world's foremost laboratories.

Although PerkinElmer's product portfolio varies from country to country, the following are some examples of the diagnostic areas we service and the analytes for which DELFIA kits may be available. Please contact your local representative for more precise information on products available in your country.

Reproductive dysfunction

The DELFIA range includes kits for all of the important steroid hormones as well as for the commonly measured glycoprotein hormones. Due to their high sensitivity and specificity, the kits are useful in investigations of patients from pre-puberty to post-menopause.

- Estradiol • Progesterone • Testosterone*
- SHBG • hCG • hLH Spec • hFSH
- Prolactin • hGH • Cortisol*

Thyroid function

For reliable diagnosis of thyroid function, kits for all analytes of importance are supplied. First line assays give excellent discrimination between hypothyroidism, normal thyroid function and thyrotoxicosis. There is a sensitive third generation TSH Ultra kit. To support changing testing strategies we also supply kits for autoantibodies.

- hTSH Ultra • FT4 • T4 • FT3 • T3
- TPOAb* • hTGAb*

Anemia

The advantages of the DELFIA method are applied in anemia investigations with a range of reliable kits.

- B₁₂* • Ferritin* • Folate*

Diabetes

AutoDELFLIA® kits for insulin and C-peptide provide the excellent sensitivity and precision typical for time-resolved fluorescence IFMA assays.

- Insulin • C-peptide

Tumor markers

The DELFIA range of reliable tumor marker kits includes PSA F/T, which measures simultaneously both free and total forms of prostate specific antigen (PSA). The kit is thus able to provide more information than conventional total PSA tests.

- hAFP* • PSA F/T* • PSA EQM* • hTg*

Celiac disease markers

The DELFIA system includes a comprehensive selection of products for the investigation and diagnosis of celiac disease. In addition to its genetic tests, PerkinElmer's serological makers have proved sensitive and specific enough in the diagnosis of celiac disease. Based on robust DELFIA chemistry the tests are easy to perform, reliable and fast.

- Anti-Gliadin IgA/IgG Dual*
- Anti-Transglutaminase IgA*
- Celiac Disease Hybridization Assay*

Maternal health

The DELFIA system includes a full range of products to support maternal and fetal health. Flexible software solutions based on the LifeCycle™ package complement a wide selection of kits including those for the DELFIA Xpress random access analyzer*.

- hAFP • hCG* • Estriol* • AFP/free hCGβ Dual*
- Free hCGβ* • PAPP-A*

Neonatal screening

The DELFIA system is the leading system for screening of newborns for hypothyroidism, congenital adrenal hyperplasia, congenital toxoplasmosis and cystic fibrosis worldwide. Kits available are sensitive, reliable and easy to use. For short hands-on times, only one incubation is necessary. The DELFIA range is complemented by a series of prompt fluorescence kits for PKU, GALT and G6PD deficiency.

- Neonatal hTSH • Neonatal T4
- Neonatal 17-OHP • Neonatal IRT
- Neonatal Toxoplasma*

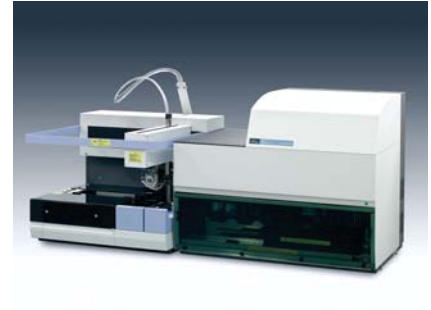
* Product not available in the USA.



VICTOR²_mD Fluorometer.



DELFIA[®] Xpress random access immunoassay system.



AutoDELFIA[®] automatic immunoassay system.

In larger diagnostics laboratories most DELFIA[®] assays are performed using the AutoDELFIA[®] automatic immunoassay system.

Using the VICTOR² D Fluorometer, semi-automatic DELFIA assays are measured in less than three minutes for up to 96 samples.

DELFIA[®] Xpress is a random access platform offering a complete solution for maternal screening.

- 1235-514/714
- 1235-501
- 6000-0010
- 1420-020
- 1296-026
- 1296-003/004
- 1296-041
- 1296-043
- 1296-071
- 1296-081
- 1296-091
- 1296-0010
- 1224-310
- 5002-0020

- AutoDELFIA[®] automatic immunoassay system
- AutoDELFIA[®] newborn screening system
- DELFIA[®] Xpress random access system
- VICTOR²_mD Fluorometer
- DELFIA[®] PlateWash
- DELFIA[®] PlateShake
- DELFIA[®] Plate Dispense
- DELFIA[®] Dispense Unit
- Wallac DBS Puncher
- Wallac MultiPuncher
- Wallac AutoPuncher
- DELFIA[®] Washer-Remove
- MultiCalc[®] Advanced
- LifeCycle software

**All PerkinElmer diagnostic products may not be available in all countries.
For information on availability please contact your local representative.**

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