Microplate innovation enables leading edge screening assays

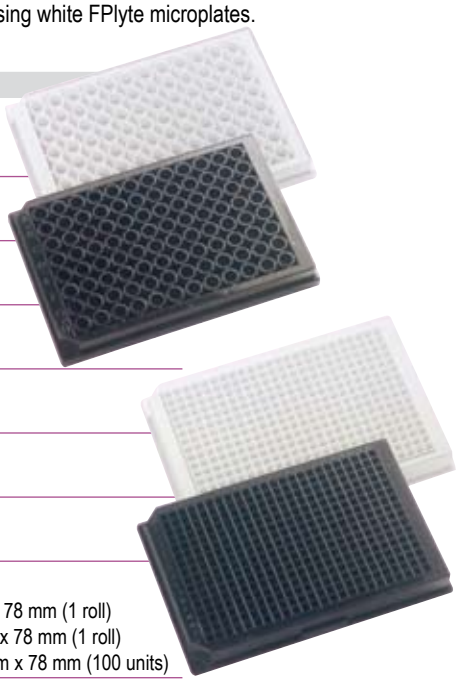
- Long wavelength UV microplates
- Limited well-to-well light cross talk
- Improved cell binding efficiency

The FPlyte microplates are microplates fully compatible with commercially available plate readers, robotic sample processors and automated liquid handling systems.
They are available in 2 formats, 96- and 384-wells and 3 colors :

The black plate provides the all-absorbing background needed to minimise background interference for sensitive fluorescence measurements. The opaque white plate maximises reflectivity enabling even weakly emitting luminescence assays to be routinely undertaken.
In addition to optimised luminescence and fluorescence measurements the unique design offers improved cell binding efficiency and allows the convenience of direct measurements on bottom reading spectrophotometers and inverted microscopes.

FPlyte microplates are ideal for quantitative assays at excitation wavelengths in the long-wavelength UV area between 325 nm – 425 nm. They offer excellent photometric performance down to 325 nm (80%T at 325 nm, 100%T at 335 nm).
Wavelengths below 350 nm are particularly useful for a variety of fluorescence assays such as HNK-1 ($\lambda_{exc./em.}$: 325/380 nm), Thiguanine ($\lambda_{exc./em.}$: 330/410 nm) using black FPlyte microplates, as well as many absorbance assays including Vitamin A (325 nm), retinol and retinyl acetate (325 nm), caspase (325 nm), acid phosphatase (330 nm) and hydroxyproline (335 nm) using white FPlyte microplates.

Description	Colour	P/N :	Qty
96-well FPlyte Microplate, standard	Black	**FP-BA7991**	50 u
	Black	**FP-BA7990**	100 u
	White	**FP-BA7950**	100 u
96-well FPlyte black well, clear bottom	Black	**FP-KT225A**	50 u
	Black	**FP-KT225B**	100 u
96-well FPlyte Microplate, Tissue Culture Treated, with lids	Black	**FP-BA8010**	100 u
	White	**FP-BA7970**	100 u
Hi Bind, 96-well FPlyte Microplate	Black	**FP-BA8000**	100 u
	White	**FP-BA7960**	100 u
Twister™ High Throughput Screening Pack, with lids, 96-well	Black	**FP-BA8020**	80 u
	White	**FP-BA8030**	80 u
384-well FPlyte Microplate, standard	Black	**FP-BA8170**	100 u
	White	**FP-BA8130**	100 u
384-well FPlyte Microplate, Tissue Culture Treated, with lids	Black	**FP-BA8180**	100 u
	White	**FP-BA8160**	100 u
Related products :			
Seal film for fluorescent assays		**FP-CD5130**	25 m x 78 mm (1 roll)
		FP-CD5110	500 m x 78 mm (1 roll)
		FP-CD5150	125 mm x 78 mm (100 units)



Please contact us for other wavelengths of fluorescent reference standards.

Technical tip

Fluorescein detection limit of an instrument
Begin with a hard weigh-out of at least 4-5 mg and solubilize in 100 mM sodium borate (pH9.5). Borate is the NIST buffer used, but it can be replaced by 50 mM phosphate (pH9). The detection limits may vary slightly. To check the absorbance spectrum and back-calculate to confirm the concentration by a known extinction coefficient as calibrated against the NIST standard. Calculate the concentration of fluorescein stock solution by C (M)=(Amax / extinction coefficient) x dilution fold, the light path is 1 cm, A max at 492+-5 nm, extinction coefficient is 78,000 M^{-1} cm^{-1}.
Make a dilution series into the same buffer, starting in the low nM range and dilute down. For most standard curves, triplicate measurements at each concentration are sufficient. But closer to the detection limit, it is recommand to take 8 replicates. This is important for the blank sample, as well. With detection limits using Z-factor analysis, a result > or = -1 is considered to be a detectable signal.
The equation for determining Z-factors is 1-((3*Sample+3*Std Dev Blank)/(Ave. read Sample - Ave. read Blank)).

Description	P/N :	Qty
Fluorescein, standard solution, 100 nM (494/519 nm)	**FP-DO6630**	50 ml
Fluorescein, standard (494/519 nm)	**FP-19365A**	1 g

New applications are under development. Contact us for your special needs.

IMAplate Technology
(Intelligent MultiFunctional Analysis)

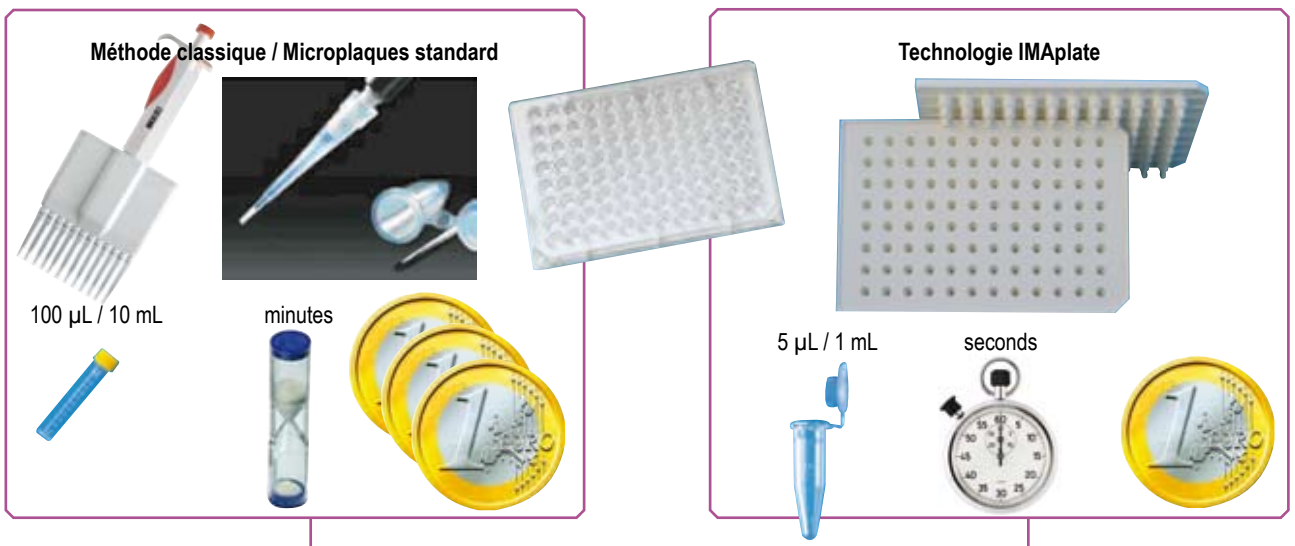
IMAplate is a polystyrene plate of 96 "microcuves". It is used to simplify and accelerate the handling of reagents, AND to make measures of absorbencies in UV, visible or InfraRed, of fluorescence or luminescence, this with any standard reader of microplate, while yielding signals at least equal or superior on microvolumes (5 µL) !

■ Applications

- 96-channel pipetting for **liquid transfer** :
ex. pipette and empty 96 x 5 µL in only 10 seconds !

- 96 bottom-free micro-cuvette array for UV, VIS or IR **spectroscopy** :
ex. assay DNA/RNA and proteins on just 5 µL with your usual microplate reader !

- 96 microwell plate for **parallel reactions, immuno-assays and cell assays** :
ex. do 96 reactions chemical or enzymatic on a unique support, miniaturize ELISAs with only 5 µl of reagents, higher signals and saving time !



Added value of IMAplates :

- Miniaturization : saving limited samples and costly reagents >3-20x / lowered price per test
- Transfer of liquid integrated to assays
- High analysis throughput, even manually
- Robust - highly reproducible
- Reduce reactions times (solid-phase assays)
- Increase sensitivity

Analysis with a microplate reader

Powered by **Interchim** in collaboration with **Berthold** technologies Gmbh

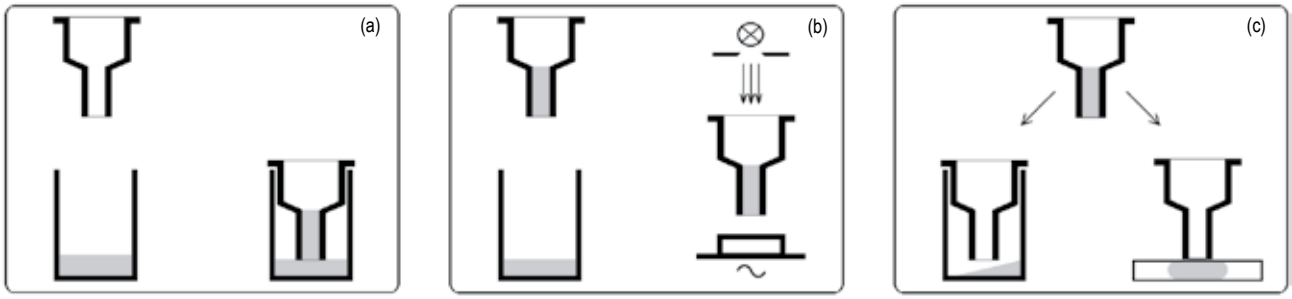
Description	P/N :	Qty
IMAplate™ Start Kit	**DR9621**	1 Kit*
IMAplate™ (96 µcuves) - white§	**DR9611**	5 ea
IMAplate™ (96 µcuves) - black§	**DT5431**	5 ea
IMAplate™ (96 µcuves) - yellow§	**DT5441**	5 ea

* contains 5 IMAplates and Reader adapter

§ White plate are recommended for luminescence measurments, Black for fluorescence measurements, and yellow plates for UV-vis spectrometry and sample handling.

How IMAPlate work?

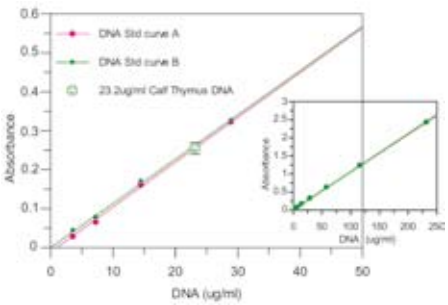
- Loading, un-loading and washes are simplified, accelerated and reliable :
  samples and reagents and buffers are loaded simultaneously by capillary force (a)(precise volume), assayed, then drawn away by an absorbent paper (c) or by centrifugation. ex. 1 plate/ samples can be washed in just 10 seconds, without machine !
- Microcuves of 5 µL save up 20 fold (rare) samples and any (costly) detection reagents (ex in ELISA).
- Reading (b) : the optical path is perfectly defined, and longer to those of standard microplates !
  Hence detection sensitivity is superior.
- The microcuves have no bottom ! Thus no parasite optical absorption take place, and you can work in UV, IR..., with superior sensitivity.
  You even can recover the samples (c).
- The microcuves have a geometry more favorable for immunoenzymatic reactions (surface/volume 3.8x superior), compared with wells of standard microplates : hence kinetic is speeded at each step (ex incubations 2 fold shorter in ELISA).

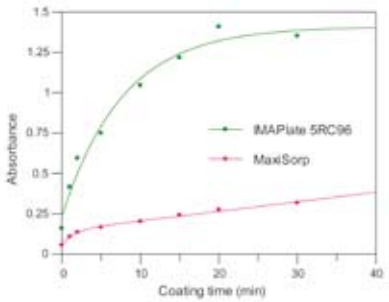


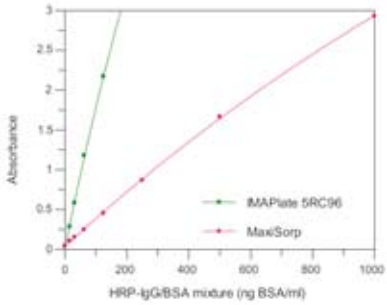
IMAplate technology combines advantageously notably in ELISA, and for multiplexed analysis.

IMAplate offer a solution at the same time more flexible, quicker and cost-effective, when :
- Samples are in limited quantity or precious,
- Reagents are costly (case of commercial kits),
- Several analysis are performed on each sample (multiplex),
- To speed steps and handling with reliability.

Examples of applications particularly appropriate :
- Serological analysis of many analytes in small animals serums
- Multiplex screening (pharma, cosmeto, vaccines)







■ Integrate your different methods/analysis

on a unique support, flexible & efficient, without instrument investment !

SPECTROMETRY
ex :
DNA/RNA dosage (260 nm)

Proteins dosage (UV280 nm)

compound InfraRed analysis

LIQUID HANDLING
ex :
Easy µcuve loading
(10 sec/capillary force, automatable)

Easy µcuve un-loading (10 sec/absorbant, centrifugation)
(automatable)

MicroCuvette : 5 µl volume

IMAplate technology

Reduce times of incubation, transfer, and washes,...

Reduce the volumes & cost of rare samples & costly reagents by 3-20X

Increase the sensitivity of detection

Colorimetric assays - ABS
ex :
Proteins Dosages : BC Assay, Coo Assay

Biochemistry (clinical, IAA) : Tests Glucose...

Cell Biology : MTT, SOD, Thromboxanes...

Fluorimetric Cell Assay - FL
ex :
Assay of Proteins : LavaPep
of DNA/RNA : Evagreen

Calcium Flux : Fluo-3, Fluo-8...

Cell viability : UptiBlue...

Toxicology : LDH, Grantoxilux...

(Chemi)Luminescent Assays - ECL
ex :
ELISA avec HRP / UptiLight ECL

Calcium Flux : Coelenterazine/aequaporin...

Cell viability : ATP/lum...

Reporter assay : Luciferase, Coelenterazine...

Homogenous-Phase assays – CELL Assays

Commercial Kits
Reduce cost/test by 2-5 fold

"home made" Assays
Reduce by 3-20 the cost of reagents

Solid-Phase assays - ELISA

ELISA Commercial Kits
Reduce cost/test by 2-5 fold AND TIME BY 20-50%

"home made" ELISA : TMB, UptiLight ECL...
Reduce by 3-20 the cost of buffers, saturants, antibodies, enz. substrates

Other systems of muliplexed analysis (Luminex, SpotELISA, Micro-Arrays)

■ Antifade Kit for Microplate

When exposed to excitation light, fluorescence intensity of dyes decreases due to their photooxidation or other photoreactions. There are very few fluorescent dyes that completely resist photobleaching. Frequently, when a section has been scanned repeatedly under strong excitation light, dyes could lose significant fluorescence signal before visual evaluation or photography can be accomplished. For examples, the photobleaching of fluoresceins (such as FITC-labeled antibodies) has become a major problem in fluorescence microscopy. In severe cases (such as phycoprotein-labeled bioconjugates), a fluorescence image of high resolution can not even be taken due to the extremely high photobleaching rate. The Antifade Kit is to reduce the dye photobleaching rate, giving researchers longer observation time. The kit contains all the essential components that can be readily applied to imaging experiments. They are all premixed and ready-to-use solutions. This kit is designed for microplate format.

Description	P/N :	Qty
Antifade Kit for Microplate	**FP-CL0530**	1 plate

■ Legals - Trademarks

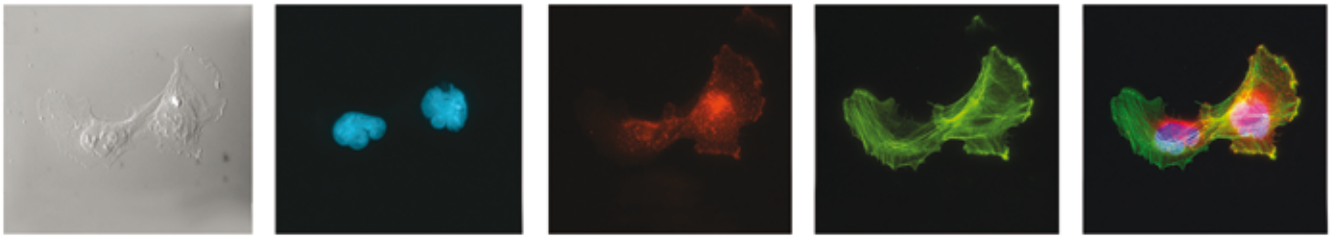
Acella from CellTechnologies
Cytonin, PeroxyGlow, and TACS from Trevigen
CyToxiLux and GranToxiLux from OncoImmun
DeepBlue C from BioSignal Packard
FluoProbes, PrimAb and UptiBlue from Interchim
MUP plus, Phospholite, and Rhod-4 from ABD
PMA from Biotium
Twister from Caliper

NEW

FluoProbes®

New Fluorescent Antibodies

- ✔ Over more efficient new dyes
- ✔ Antibodies with high affinity and specificity
- ✔ Available within 24 hours*



*based on stock availabilty

interchim
211 bis Avenue J.F. Kennedy - BP1140
03103 Montluçon Cedex - France
Tel 33(0)4 70038855 - Fax 33(0)4 70038260
e-mail interbiotech@interchim.com