

# FORENSIC-PRODUCT CATALOGUE

for DNA Laboratories



Better science for forensics  
Color-coded RSID cassettes  
Detection of Saliva, Semen,  
Blood or Urine  
Human specific and highly sensitive



Improve sperm detection  
SOS-Kit for In-Solution-Staining  
Ready in 20 minutes  
For sexual assault evidence  
Confirmatory for human sperm



Standardize RSID test strip results  
Capture images with new  
RSID-READER  
Automatic documentation  
Field and lab compatible





Introducing the newest colors for RSID cassettes  
 New look – same specificity and sensitivity – easily identifiable



The RSID Tests for Semen, Saliva, Blood and Urine are now color coded.  
 This enables more rapid allocation of the test chips on the laboratory bench.  
 Mix-ups and mistakes are thus virtually excluded.



Reduced Incubation Time  
 with no loss of sensitivity or specificity


To determine if RSID-Semen and RSID-Saliva are compatible with shorter sample extraction times, a series of time course experiments were undertaken with control swabs, aged samples (several years old). These data clearly demonstrated that similar results could be obtained from all tested sample types using incubation times as short as 10 seconds (with shaking/Vortexer) to as long as 1 hour. Room temperature extraction of forensic samples for a minimum of 10 seconds with shaking is sufficient for detection of semenogelin with RSID-Semen and RSID-Saliva. Longer incubation times are optional.

## RSID-READER

time to read your test



- Reads all kinds of RSID strips and documents the results of the testing
- Standardizes RSID-test strip results
- Eliminates uncertainty from reading test strips
- Stores all data in the RSID-READER memory including results and captured images, until they are downloaded to your computer
- Exports data from the Reader to the free Data Manager Software

 RSID-Reader **cat number #RR-007-3**  
 comes with free data manager software



First **specific** test for human  $\alpha$ -amylase (salivary (amyA) antigen)  
 Detects as little as 10 nL of human saliva  
 No cross reaction observed with blood, urine, semen, vaginal secretions, or menstrual blood  
 Animal saliva does not cross react with this test procedure  
 10 seconds extraction

RSID-Saliva  
**cat number #0130** with 25 tests per box + universal buffer



First **confirmatory** test for human seminal fluid  
 Specific for human semenogelin antigen  
 Detects as little as 10 nL of human seminal fluid  
 No cross reaction observed with saliva, blood, urine, vaginal secretions  
 Animal body fluids or animal seminal fluid do not cross react  
 (Samples tested: bovine, porcine, caprine, and ovine semen etc.)

RSID-Semen  
**cat number #0230** with 25 tests per box + universal buffer



First **confirmatory** test for human blood  
 Specific for human Glycophorin A antigen  
 No High Dose Hook Effect  
 Detects as little as 50 nL of human blood  
 No cross reaction observed with human saliva, semen, urine, breast milk, or amniotic fluid

RSID-Blood  
**cat number #0330** with 25 tests per box + universal buffer

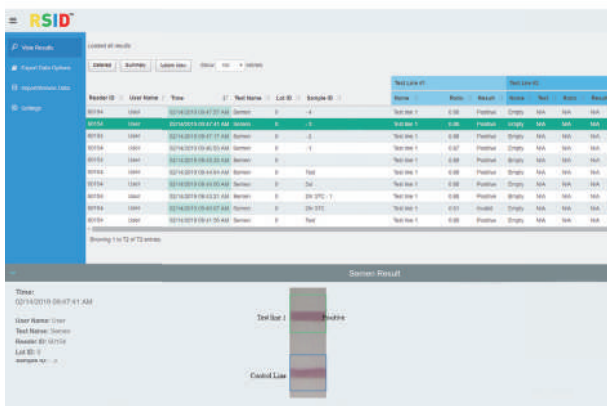


First **rapid** test for human urine  
 Detects Tamm-Horsfall protein  
 No cross reactivity with other human body fluids  
 Detects as little as 10  $\mu$ l of human urine  
 No cross-reaction observed with human saliva, semen, blood, vaginal fluid or menstrual blood  
 Dual Polyclonal Antibodies

RSID-Urine  
**cat number #0400-10** with 10 tests per box + single buffer

# Documentation

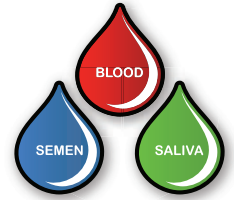
by using free RSID-Reader Software



- Import/browse Data: Import test results from the RSID READER or browse to view other stored results.
- View results: View details of tests imported from the RSID READER.
- Export data options: Export your data into an excel document
- Settings: Customize your Data Manager experience
- Unit status: Send a diagnostic report when trouble-shooting
- Print reports for documentation
- Export/print to PDF

# RSID-Multi-Fluid

Lab and Field Kits for Blood, Semen and Saliva:



Field Kit with SALIVA, SEMEN, BLOOD 15 tests/kit (5 of each)

Multi-Fluid Field-Kit  
cat number #5500 with pre-loaded buffers and single use pipettes



Lab Kit with SALIVA, SEMEN, BLOOD 30 tests/kit (10 of each)

Multi-Fluid Lab-Kit  
cat number #5510 with 2 universal buffers

Lab Kit with SALIVA, SEMEN, BLOOD 15 tests/kit (5 of each)

Multi-Fluid Lab-Kit  
cat number #5505 with universal buffer



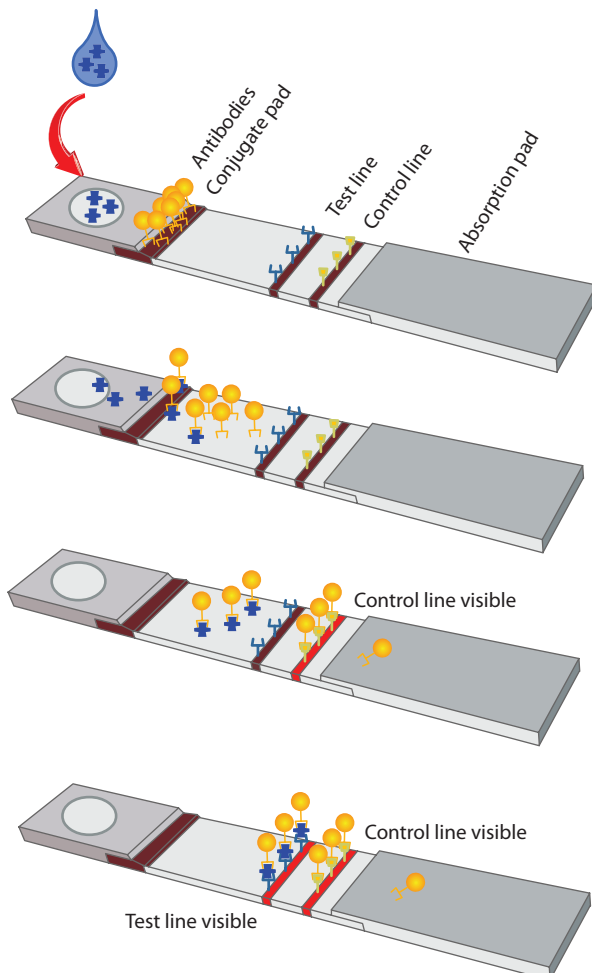
## Principle of the immunochromatographic flow tests:

The RSID® Saliva test for example is an immunochromatographic assay that uses two monoclonal antibodies specific for human salivary  $\alpha$ -amylase. This system consists of overlapping components treated such that the tested fluid is transported from the conjugate pad to the membrane and is finally retained on the wick. The conjugate pad and membrane are pretreated before assembly. The user just needs to add the extract in diluent buffer (provided) to initiate the test.

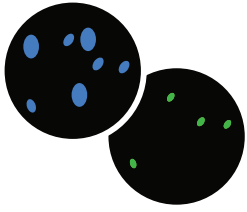
Once the tested sample is added to the sample window, the buffer and sample diffuse through the conjugate pad, which has pre-dispersed colloidal gold conjugated anti-human salivary  $\alpha$ -amylase monoclonal antibodies. The diluent redissolves the colloidal gold labeled anti  $\alpha$ -amylase antibodies which will bind salivary amylase if it is present in the sample.

Salivary  $\alpha$ -amylase-colloidal gold antibody complexes are transported by bulk fluid flow to the membrane phase of the test strip. These complexes, if present, migrate along the membrane and are bound at the 'test line' creating a visible red 'bar' against the white membrane. Colloidal gold labeled mouse antibody will continue to progress along the membrane and be bound by anti-mouse antibody at the 'control line' again creating a visible signal.

A visible line at the 'test' position indicates the presence of human saliva; a visible line at the 'control' position indicates that the test is working correctly.



# SPERM HY-LITER™ SOS



## SPERM HY-LITER SOS / In Solution Staining

- ◆ Stain in 20 minutes, stain in tube
- ◆ Spin down (3 minutes) and add to slide
- ◆ Search for sperm
- ◆ Includes required DTT
- ◆ Complete fluorescent staining kit for sexual assault evidence

Stained slides must be visualized using a fluorescence microscope fitted with appropriate filters. Cell nuclei, including epithelial and sperm, can be visualized using DAPI-compatible filters. Human sperm heads can be visualized using fluorescein or Alexa 488 compatible filters.

- ◆ Sperm-HY-LITER Express-SOS  
cat number #7302-SOS with 50 stains per kit

### SAE Extract

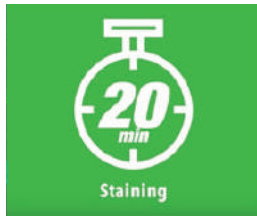


**Detect Semen**  
10 second extraction



### Solution staining

20 minutes



Step 1  
SP + DTT  
5 min



Step 2  
Blocking  
5 min



Step 3  
3 min spin



Step 4  
Antibody  
5 min



Step 5  
3 min spin



**Find Sperm**  
in 10 seconds

Sperm cells in solution are significantly more sensitive to DTT relative to sperm stained on slides. Accurate concentrations and incubation times are particularly important in the SOS technique.

#### Preparation of extracts:

- ◆ Extract swab or fabric cutting in 1.7 ml microcentrifuge tube in 0.5 ml of PBS. Incubate on bench top for 1-2 hrs with occasional mixing.
- ◆ Recover cells using Spin basket: transfer the soaked swab head or fabric cutting into a spin basket, place the basket with the substrate into its same 1.7 ml tube. Centrifuge for 5 minutes. Carefully remove supernatant from cell pellet. For staining, use 10-20 µl of resuspended cell pellet for staining in solution.

# They Glow



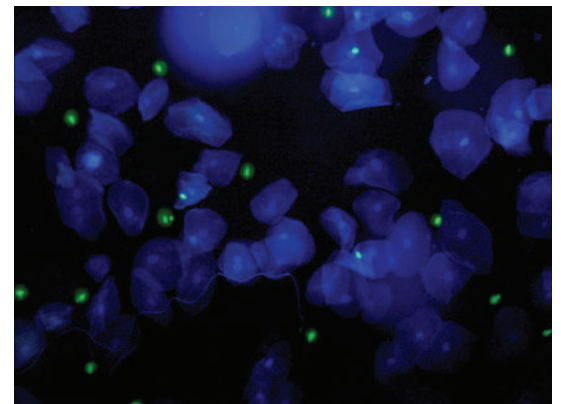
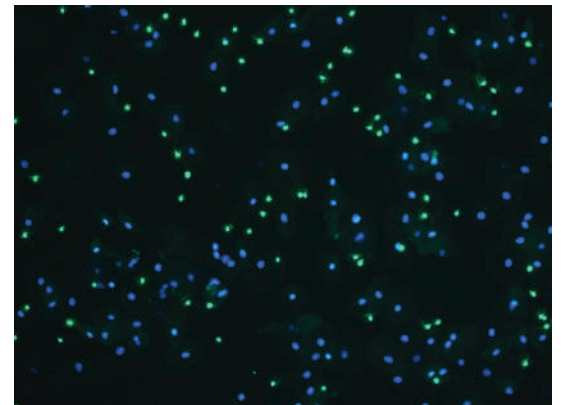
Immunofluorescence detection kit for human spermatozoa from sexual assault evidence  
Two fluorescent dyes: nuclear (**non-specific**) + sperm (**specific**)

**HY-LITER EXPRESS** staining time reduced to ~60 minutes

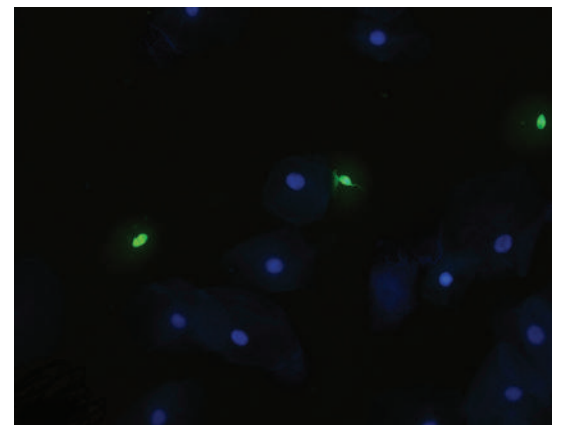
- ◆ Positive identification of sperm
- ◆ Meets new audit standards for evidence preservation
- ◆ Microscopic screening of sperm
- ◆ Human specific – monoclonal antibody-based
- ◆ Fluorescent detection – debris does not interfere

- Step 1: Attach cells to slide - 5 min incubation
- Step 2: Sample preparation - 15 min incubation
- Step 3: Blocking - 15 min incubation
- Step 4: Labeling and staining - 15 min incubation
- Step 5: Mounting & cover slip (optional) - 20 min

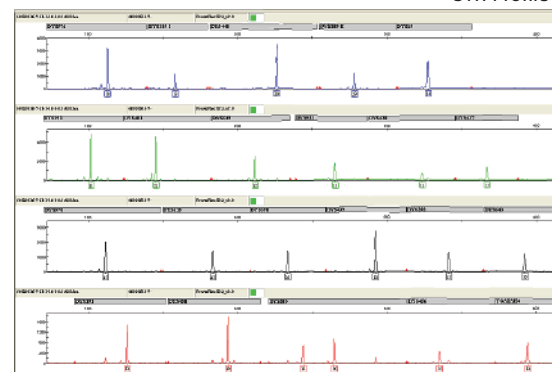
- ◆ Fast staining time: Staining time reduced to ~60 minutes
- ◆ Simple staining technique: quick fixation, sample preparation, block, stain – coverslip and visualize
- ◆ Unique specificity: only human sperm heads are identified
- ◆ Confirmation steps: nuclear staining with **DAPI**
- ◆ Sensitivity: identify a single spermatozoa on a slide in less than 2 minutes (smear or extract slides)
- ◆ Brighter signal than normal HY-LITER version: better fluorophore – brighter sperm heads



Sperm: CF488 green / Nuclei: DAPI blue

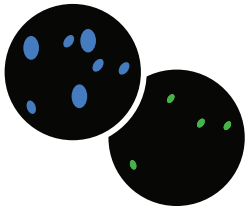


STR-Profile



 Sperm-HY-LITER **EXPRESS**  
cat number #7302 with 50 stains per kit

# SPERM HY-LITER™



## Introduction

SPERM HY-LITER uses a fluorescently tagged anti-human sperm head monoclonal antibody to detect the presence of human sperm. Many identification methods for semen are directed towards protein markers in seminal fluid rather than to human sperm cells. Further, cell stains commonly relied upon to identify sperm provide no species information. SPERM HY-LITER provides specific identification of the human origin of the sample and confirms that male-origin cells are present.

## Principle of the Test

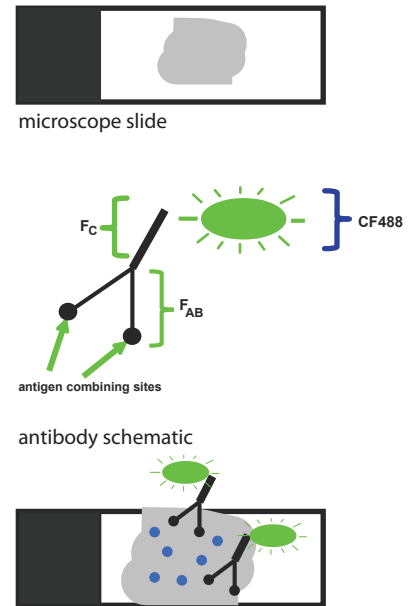
SPERM HY-LITER uses an Alexa 488 derivatized mouse monoclonal antibody to human sperm heads to specifically identify human sperm from sexual assault evidence by fluorescence microscopy. The method requires a fluorescence microscope: processed slides must be visualized on a fluorescence microscope fitted with the correct excitation and emission filters and light source. In addition to a human sperm specific reagent, SPERM-HYLITER incorporates a second fluorescent dye that stains all nuclei present in the sample (4',6-diamidino-2-phenylindole, DAPI). Visualization of fluorescent nuclei is not required for sperm detection, but is recommended for both manual and automated sperm searches.

## Visualization of Human Sperm Heads

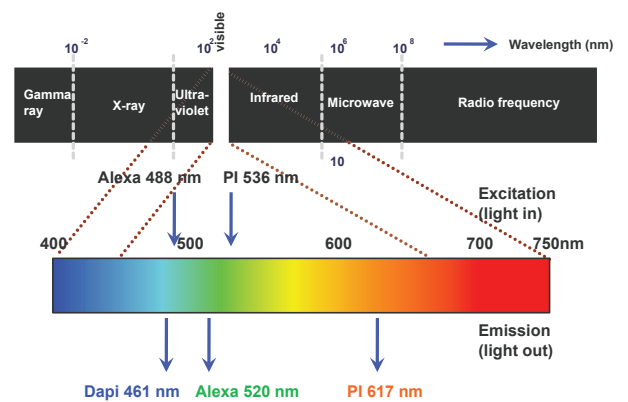
Cell nuclei, including epithelial and sperm, can be visualized using DAPI-compatible filters. Human sperm heads can be visualized using fluorescein or Alexa 488 compatible filters. Slides may be scanned at a final magnification of 100x, 200x, or 400x at the operator's discretion.

## Specificity

SPERM HY-LITER is specific for human sperm heads. No cross-reactivity with epithelial nuclei, blood cells or animal semen from horse, bull, sheep, goat, pig, dog, cat, mouse and chimpanzee has been observed. To date, semen from 3 nonhuman primates has been tested: common chimp, Rhesus macaque and cynomolgus macaque. SPERM HY-LITER does NOT detect sperm heads from these species.



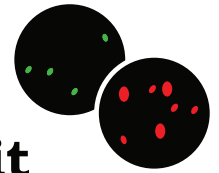
Antigen on a microscope slide – use antibody to locate or mark position of antigen / epitope on slide



**They Glow**

# They Glow

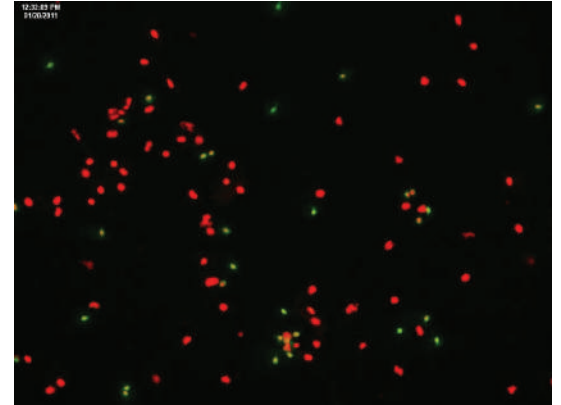
**SPERM  
HY-LITER™  
PI-Kit**



**For LCM Laser Capture Microdissection**  
or micro-manipulator picking

Immunofluorescence detection kit for human spermatozoa from sexual assault evidence  
Two fluorescent dyes: nuclear (**non-specific**) + sperm (**specific**)

**SPERM HY-LITER™ PI** – CF488 and Propidium Iodide  
Designed for sperm isolation using LCM\* or aureka® or cell sorting  
Brightest signal, 30 min incubation steps



slide mounted and with dual filter

- ◆ No interference with autofluorescence from membrane slides
- ◆ Different nuclear stain: Propidium Iodide
- ◆ Avoids UV damage - avoids interference with PEN and PET LCM membranes
- ◆ Better signal for non-coverslipped slides: brighter sperm heads
- ◆ Dyes do not interfere with downstream DNA-STR analysis

\*LCM is a method for isolating specific cells of interest from microscopic regions of tissue/cells/organisms (dissection on a microscopic scale with the help of a laser).

**The ZEISS PALM CombiSystem** combines laser microdissection with optical trapping.

For laser microdissection mark an element on your screen and then start the laser to separate it from unwanted tissue.

A targeted laser pulse will 'catapult' your element upwards and contact-free into a collection vessel for further analysis.



The microsampling platform **aureka®** is a unique system using the MikroDip method.

The micromanipulators are integrated by default in the ZEISS Axio.ZoomV16.

The microsphere handling is realized via a gripper with adapted tips, which is guided by the manipulator.



◆ Sperm-HY-LITER PI  
**cat number #7402** with 50 stains per kit





## Sperm-HY-LITER Microscope

Galantos Genetics is official SILVER-Partner of ZEISS  
and official distributor for ZEISS microscopes

### Our Microscope -HY-LITER Express package:

#### NEW: Axiolab 5 TL/FL, 6xH DIC encoded

##### Components:

- Filter 01 with reflector module EX BP 365/12, BS FT 395, EM LP 397
- Filter 44 FITC special, shift free EX BP 475/40, BS FT 500, EM BP 530/50
- Solid-State light source Colibri 3, GB-UV 3-channel for Sperm-HY-LITER
- Binocular phototube 30°/23 (100:0/0:100), camera port with interface 60N
- Objectives N-Achroplan 10x/0,25 Ph1 M27+ 20x/0,45 Ph2 M27+40x/0,65 Ph2 M27
- Condenser, achromatic-aplanatic 0.9 H D Ph DIC
- Illuminator HXP 120 V (D), lamp module & infrared filter
- Fluorescence light source with CAN connection  
etc. ready to use with Sperm-HY-LITER



Sperm-HY-LITER Microscope  
starting price with light source ~ 19.000 €

#### ZEN-lite software

for your PC or tablet, works with Apple and Windows tablets



ZEN - Software  
lite version available for free

#### ZEISS Camera



Axiocam 208 color  
starting price ~ 1800 €

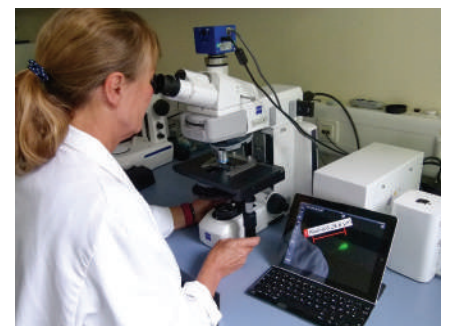


#### Microscope Training:

Together with our partner OptoSys-GmbH in Darmstadt we offer microscope trainings and courses; we help to upgrade old microscopes and to implement the Sperm-HY-LITER technology into your daily workflow.



Training/course / implementation  
~ ask for offers



# Amplicon



## Post-PCR Recovery for DNA-STR Multiplex

### Post-PCR Clean-up Kit:

- ◆ Boost Amplicon RFUs
- ◆ Elute with Formamide
- ◆ Ready for CE
- ◆ Use ALL your Data

### Perfect for:

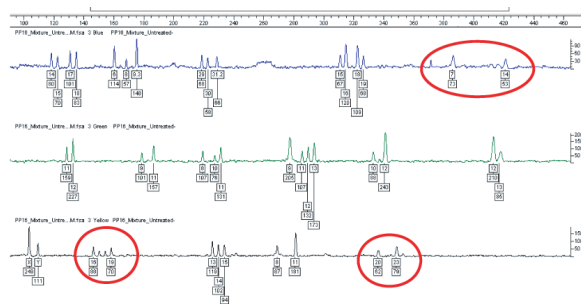
- ◆ Partial DNA Profiles
- ◆ Low Template Reactions
- ◆ Inhibited PCR
- ◆ Touch DNA
- ◆ Simplifying mixture interpretation



### Better Mixture Interpretation Minor Profile Recovery

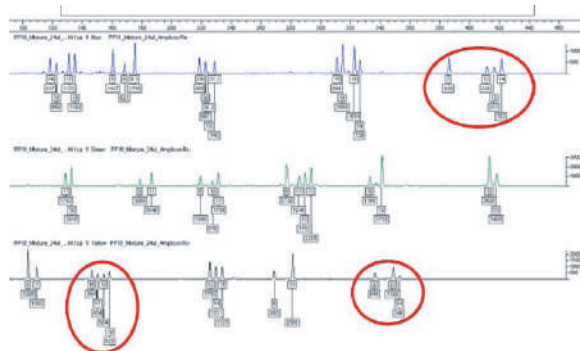
#### BEFORE

Mixed Profile  
Total RFU: 4,778



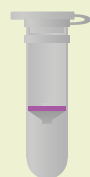
#### AFTER

Recover 5 alleles @ 3 loci  
of minor contributor  
Total RFU: 63,735



### 10 min. Procedure

PCR Reaction + Binding Buffer



Load on Column

Spin 3 min  
[Discard run-through]

+

Formamide + Size Standards  
[Incubate 5 min, RT°C]

Spin 2 min

Load Elution on CE









Recover ~7-20x RFU






◆ #6000 Amplicon-RX  
20 test/kit

# EXCERPT FROM OUR MAIN CATALOGUE








## RSID Lab kits

-  #0130 RSID-Saliva  
25 tests/kit with Universal Buffer
-  #0230 RSID-Semen  
25 tests/kit with Universal Buffer
-  #0330 RSID-Blood  
25 tests/kit with Universal Buffer
-  #0400-10 RSID-Urine  
10 tests/kit with Single Buffer
-  #5510 RSID-Multifluid-Lab Kit w/SALIVA, SEMEN, BLOOD  
30 tests/kit (10 of each) with 2 Universal Buffers
-  #RR-007-3 RSID-Reader  
with software and cables


## RSID Field kits

-  #1000-small RSID-Saliva Field-Kit  
5 tests/kit with pre-loaded buffer, pipettes
-  #2000-small RSID-Semen Field-Kit  
5 tests/kit with pre-loaded buffer, pipettes
-  #3000-small RSID-Blood Field-Kit  
5 tests/kit with pre-loaded buffer, pipettes
-  #4000-small RSID-Urine Field-Kit  
5 tests/kit with pre-loaded buffer, pipettes
-  #5500 RSID-Multifluid-Field Kit w/SALIVA, SEMEN, BLOOD  
15 tests/kit (5 of each) with pre-loaded buffer, pipettes


## SPERM HY-LITER

-  #7302 Sperm HY-LITER Express Medium  
reagents for staining 50, 11mm wells or 100, 8mm wells
-  #7302-SOS Sperm HY-LITER Express Medium SOS-Kit  
In Solution Staining Kit with International DTT, Stain 50 slides
-  #7402 Sperm HY-LITER-PI Medium  
reagents for staining 50, 11mm wells or 100, 8mm wells
-  #7402-SOS Sperm HY-LITER-PI SOS-Kit  
New Solution Staining kit with International DTT, stain 50 slides
-  #17777 Sperm HY-LITER  
Microscope package with ZEISS microscope
-  #8000 Sperm HY-LITER Hydrophobic pen  
for outlining smear slides
-  #8050-INT Ready Made DTT 100 x 110 µL  
single-use aliquots of 1.0 M stock pH 8.0 DTT
-  #9211-26 Sperm HY-LITER slides  
2 x 11 mm, 25 slides/pack & storage box
-  #9111-26 Sperm HY-LITER slides  
1 x 11 mm, 25 slides/pack & storage box




## Amplicon

-  #6000 Amplicon-RX  
20 test/kit

## iPLEX **ONLY FOR PATERNITY TESTING OR RESEARCH**

-  #6600 i-PLEX  
96 reactions STR-kit  
CODIS + 5 (18 + 1), 5 dye system  
use your existing instrumentation (ABI3100 series and ABI310 compatible)  
lyophilized format, ship at room temperature, no dry ice needed

## ONE TOUCH™









-  #7001 ONE TOUCH™ DNA Rescue Touch Kits  
20 pre & post purification columns with accessories
-  #7002 ONE TOUCH™ DNA Rescue Fingerprint Kits  
20 pre & post purification columns with accessories
-  #7003 ONE TOUCH™ DNA Rescue Adhesive Kits  
20 pre & post purification columns with 20 lysis chambers

# Play Sperm-Doku with us and win !

Each row, column and rectangle needs to be filled out with the symbols, without repeating any symbol within the row, column or rectangle.

We raffle a foot hammock for your home office among the correct answers received every month.



					
					<b>SPERM HY-LITER SOS</b>
<b>RSID</b>					
			<b>RSID</b>		
					
					



Take a photo of your result and forward this to us by e-mail or Whatsapp including your contact data.



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Manufactured by:  
**IFI**  
DNA TESTING & TECHNOLOGIES



**-G-**  
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