



**COST EFFICIENT
AND RELIABLE
NEWBORN SCREENING**



VICTOR2™ D

The semi-automated system for optimized newborn screening



EFFECTIVE
DETECTION
FOR A HEALTHIER
FUTURE



VICTOR2™ D PLATFORM

TRUSTED SYSTEM FOR AFFORDABLE AND EXPANDABLE NEWBORN SCREENING

PerkinElmer is the global market leader in neonatal screening, currently serving customers in more than 100 countries. Over 650 million babies have been screened with our products. Every day 70 babies around the world get a healthier start to life thanks to the early detection of a serious disorder.

Since 1999, the semi-automated system has been used in over 200 NBS laboratories all over the world. The large number of users is an indication to the quality and reliability of the platform: nearly 10 million newborns are screened with Victor2™ D each year. The semi-automated system is a robust, cost-efficient solution for screening seven NBS disorders: congenital hypothyroidism, phenylketonuria, congenital adrenal hyperplasia, galactosemia, cystic fibrosis, biotinidase deficiency and G6PD deficiency.

WHY CHOOSE THE SEMI-AUTOMATED NBS SYSTEM?



IDEAL SOLUTION
FOR DIFFERENT SIZE
LABORATORIES



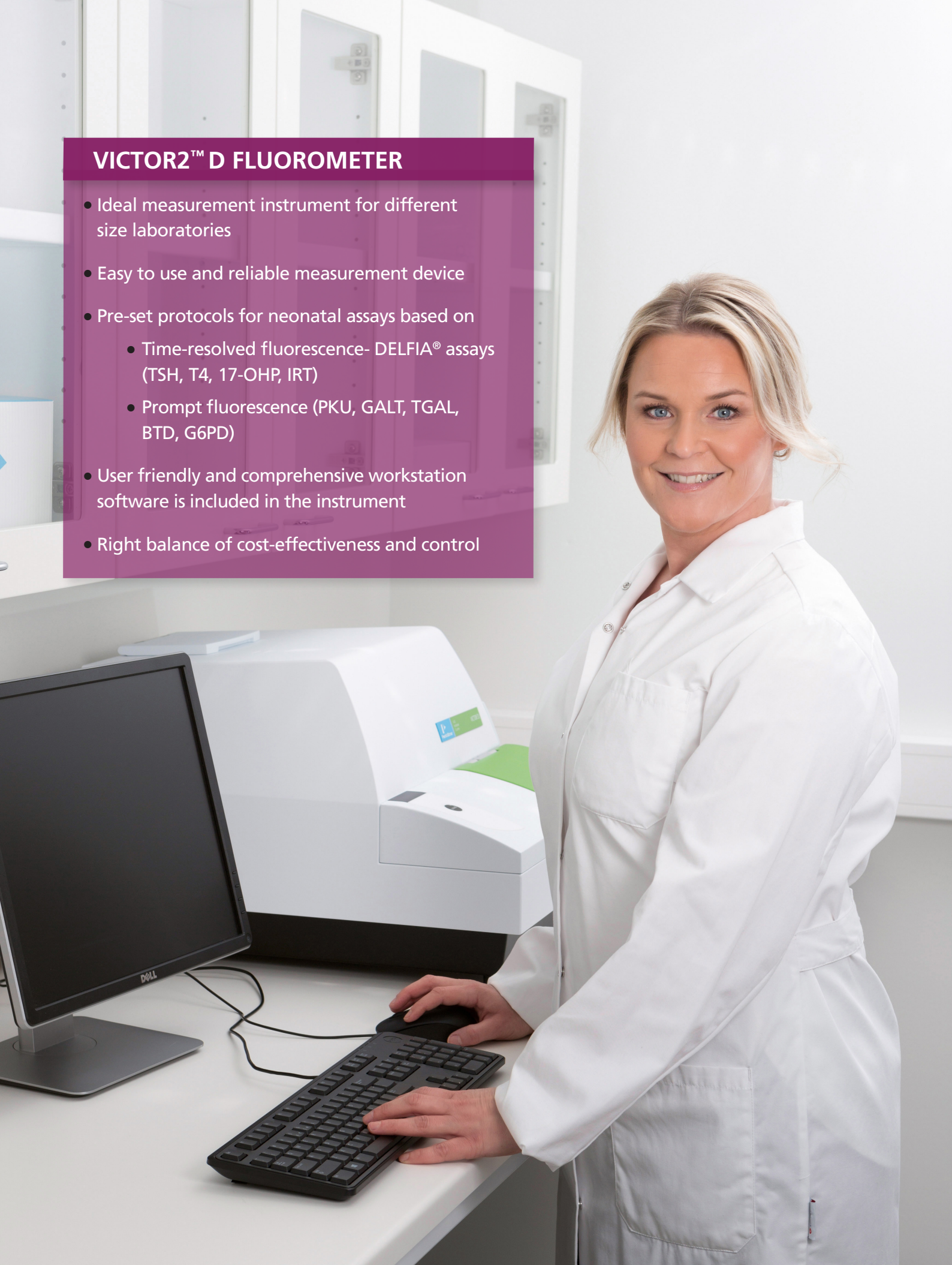
FULLY EXPANDABLE
WHEN NEEDS IN THE
LABORATORY CHANGE –
ADD NEW PARAMETERS OR
INCREASE SAMPLE VOLUME



TOTAL SOLUTION
GUARANTEES EXCELLENT
SUPPORT AND SERVICE
THROUGHOUT THE
WHOLE WORKFLOW

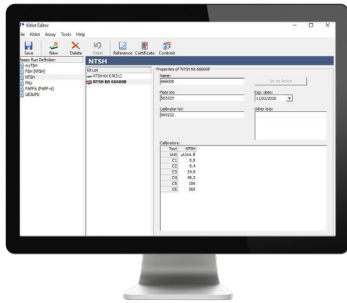
VICTOR2™ D FLUOROMETER

- Ideal measurement instrument for different size laboratories
- Easy to use and reliable measurement device
- Pre-set protocols for neonatal assays based on
 - Time-resolved fluorescence- DELFIA® assays (TSH, T4, 17-OHP, IRT)
 - Prompt fluorescence (PKU, GALT, TGAL, BTD, G6PD)
- User friendly and comprehensive workstation software is included in the instrument
- Right balance of cost-effectiveness and control

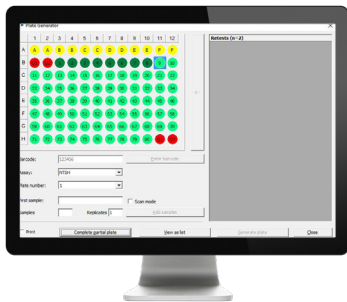


EFFICIENT WORKFLOW AND QUALITY MANAGEMENT WITH WORKSTATION SOFTWARE

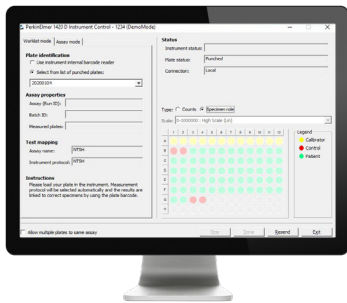
Victor2™ D Workstation Software Comprises Five Modules, Each Module is Designed to Improve Daily Work and Long-Term Follow-Up



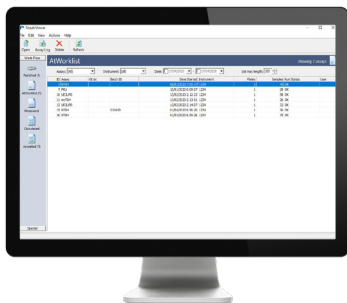
1 KITLOT EDITOR
Kitlot Editor is an easy way to enter kitlot information. It also allows for editing cut-off limits, build reference curves from existing calibration curves, and editing default plate maps.



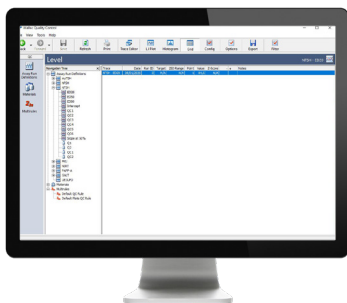
2 PLATE GENERATOR
Plate Generator can be used to generate worklists if they are not generated directly through connected punchers.



3 INSTRUMENT CONTROL
Use instrument control to start assay runs by choosing the worklist or determining the parameters to run. The plate status and image is visible throughout the assay run.



4 RESULT VIEWER
Result Viewer allows you to browse assay runs and related data in plate or worksheet formats. The screen layout can be customized to meet your laboratories' specific requirements.



5 QUALITY CONTROL PROGRAM
The Quality Control Program supports effective long-term management and follow-up of quality control data. Store and graphically review results for the controls and monitor the level of a quality control sample. You can also specify quality control run definitions and materials, as well as QC multirules.

THE SEMI-AUTOMATED SYSTEM FOR YOUR SCREENING PROGRAM

SAMPLE COLLECTION AND PREPARATION



PERKINELMER 226 SAMPLE COLLECTION DEVICE

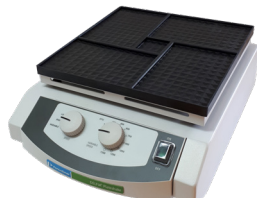
- Dried blood spot collection card is 100% pure cotton linter filter paper optimized for DBS sampling
- PerkinElmer can custom-print and manufacture card format that meets your requirements



DBS PUNCHER™ INSTRUMENT

- Automated device for punching dried-blood spot samples into microtitration plates
- The 2-plate capacity
- Easy-to-use and robust option for lower capacity screening
- Alternatively Panthera-Puncher 9 with 9-plate capacity

SAMPLE PROCESSING



DELTA PLATESHAKE

- Two pre-set shaking speeds optimized for DELFIA assays
- Fully adjustable shaking speed (100 - 1350 rpm)
- With non-slip surface convenient to use



TRINEST™ INCUBATOR SHAKER

- A high quality, accurate and uniform temperature assures highly repeatable results
- Capacity for three plates
- Up to 20 incubating and shaking programs can be stored



DELTA WASHER-DISKREMOVE

- Automatically removes the eluted filter paper disks from the wells
- Performs all needed wash stages as specified in the assay protocol
- Optimized for use with DELFIA neonatal assays



DELTA PLATE DISPENSE

- Automatic and precise addition of Enhancement solution
- As an option DELFIA Dispense Unit can be added allowing automatic dispensing e.g. buffer or tracer solution

MEASURING RESULT MANAGEMENT REPORTING



VICTOR2™ D AND WORKSTATION SOFTWARE

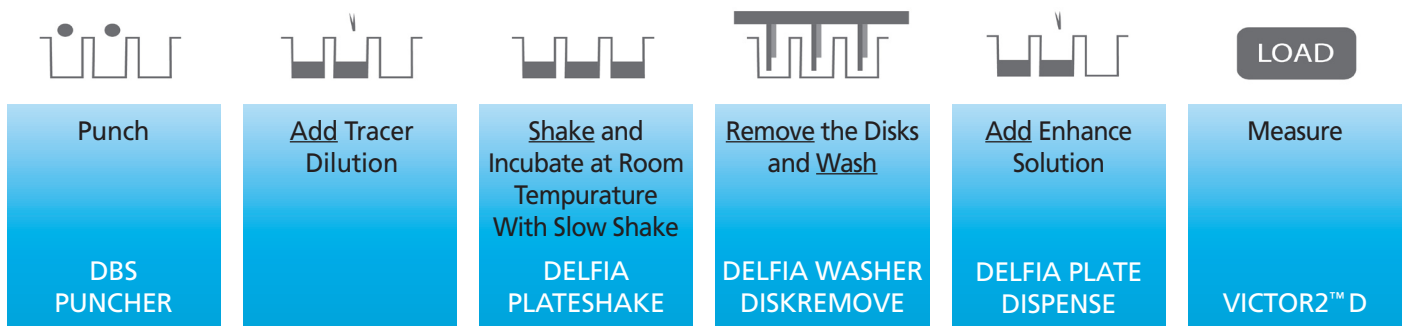
OPTIMIZED PRODUCTS FOR BEST RESULTS

All products and instruments are especially optimized for use with PerkinElmer kits. They may be supplied alone or as part of a complete semi-automatic system for performing DELFIA and other assays.

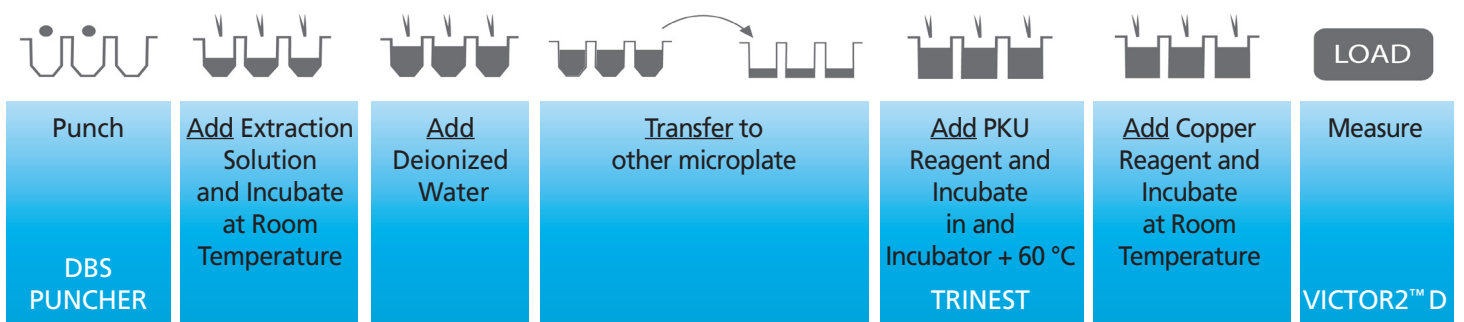
Sample Processing Devices Needed by Assay

	DELFLA PLATESHAKE	TRINEST INCUBATOR SHAKER	DELFLA WASHER-DISKREMOVE	DELFLA PLATE DISPENSE
TSH	×		×	optional
T4	×		×	optional
17-OHP	×		×	optional
IRT	×		×	optional
PKU		×		
G6PD	×			
BTD	×	×		
GALT		×		
TGAL	×			

DELFLA Neonatal hTSH Assay Workflow



Neonatal Phenylalanine Assay Workflow



COMPLETE RANGE. BETTER SCREENING.



COMPLETE RANGE OF ASSAYS

- VICTOR2™ D manual platform covers a wide test panel for easy and cost-efficient analyte expansion.
- High accuracy and low repeat testing rate.
- Low lot-to-lot variation, means less cut-off resets.
- Immunoassay and enzymatic methods are widely used and allows for flexibility to screen just one or several diseases.

THE RELIABILITY OF CHEMISTRY

*DELFI*A Technology – Time-resolved Fluorometry

- In TRF, measurement is delayed after excitation until background emissions have decayed.
- TRF detection together with the unique lanthanide-based DELFIA chemistry ensure high sensitivity, superior stability and low assay variation.

VALIDATED KITS

- Each VICTOR2™ D manual Neonatal kit contains all of the assay-specific reagents needed including plates, all reagents, calibrators and controls. Separated bulk reagents are not needed*.
- The assay-specific reagents come in easy to-store packs with contents for 960 tests (10 plates). To support lower/higher throughput needs other pack size are also available:
 - Smaller 358 test (4plates) available for 17-OHP and IRT
 - Bigger 4800 tests (50 plates) available for PKU, GALT and Biotinidase

CALIBRATORS AND CONTROLS IN DBS FORMAT

- Six lot-specific dried blood spot calibrators are supplied, to provide thorough coverage of the clinical area.
- Neonatal assays includes both normal and abnormal controls to assure the validity of the results.

PerkinElmer is Long-Standing Provider and Market Leader in NBS -
Proof of Our Reliability and Customer Satisfaction

PerkinElmer Offers Reagents, Instruments, Software, Training and Support

*With Neonatal Phenylalanine kit need to order extra plates and covers.

HIGH QUALITY ASSAYS FOR OPTIMIZED SCREENING

DELFLIA NEONATAL HTSH KIT A032-310 (10 PLATES)

- Based on DELFLIA technology
- Intended use: The quantitative determination of human thyroid stimulating hormone (hTSH) in blood specimens dried on filter paper as an aid in screening newborns for congenital hypothyroidism

DELFLIA NEONATAL THYROXINE (T4) KIT A065-110 (10 PLATES)

- Based on DELFLIA technology
- Intended use: The quantitative determination of human thyroxine (T4) in blood specimens dried on filter paper as an aid in screening newborns for congenital hypothyroidism

DELFLIA NEONATAL 17 α -OH-PROGESTERONE KIT A024-104 (4 PLATES) AND A024-110 (10 PLATES)

- Based on DELFLIA technology
- Intended use: The quantitative determination of human 17 α -OH progesterone in blood specimens dried on filter paper as an aid in screening newborns for congenital adrenal hyperplasia

DELFLIA NEONATAL IRT KIT A005-204 (4 PLATES) AND A005-210 (10 PLATES)

- Based on DELFLIA technology
- Intended use: The quantitative determination of human immunoreactive trypsin(ogen) (IRT) in blood specimens dried on filter paper as an aid in screening newborns for cystic fibrosis

NEONATAL PHENYLALANINE KIT* NP-1000 (10 PLATES) AND NP-4000 (50 PLATES)

- The kit makes use of a fluorescent ninhydrin method
- Intended use: The quantitative determination of phenylalanine in blood specimens dried on filter paper as an aid in screening newborns for elevated levels phenylalanine in the blood

NEONATAL G6PD KIT ND-1000 (10 PLATES)

- The assay involves the oxidation of G-6-P substrate to 6-PG by the G6PD enzyme present in the sample
- Intended use: The quantitative determination of glucose-6-phosphate concentrations in blood specimens dried on filter paper as an aid in screening newborns for G6PD deficiency

NEONATAL TOTAL GALACTOSE KIT 3029-0010 (10 PLATES)

- Controls in DBS including both Gal and Gal-1-P
- The kit makes use of a fluorescent galactose oxidase method
- Intended use: The quantitative determination of total galactose (galactose and galactose-1-phosphate) concentrations in blood specimens dried on filter paper as an aid in screening newborns for galactosemia

NEONATAL GALT KIT NG-1100 (10 PLATES) AND NG-4100 (50 PLATES)

- The assay is an adaptation of the semi-quantitative enzymatic assay of Beutler and Baluda
- Intended use: the (semi-quantitative) determination of galactose-1-phosphate uridyl transferase (GALT) concentrations in blood specimens dried on filter paper as an aid in screening newborns for classical galactosemia caused by GALT deficiency

NEONATAL BIOTINIDASE KIT 3018-0010 (10 PLATES) AND 3018-001B (50 PLATES)

- The assay is based on a semi-quantitative fluorometric assay
- Intended use: The semi-quantitative determination of biotinidase activity in blood specimens dried on filter paper as an aid in screening newborns for biotinidase deficiency

INSTRUMENT SPECIFICATIONS



VICTOR2™ D INSTRUMENT

Product Number: 1420-020

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 383 mm
Width: 485 mm
Depth: 590 mm
Weight: 49 kg

Power Requirements

Power Consumption Max: 400 VA
Voltage/Frequency: 110 -120 V/ 220 - 240 V,
50/60 Hz

Environmental Conditions

Temperature: 15-35 °C
Relative Humidity: 10-85 %

Measurement Time: 1s / sample, 3 min / plate
Noise of the Device
in Function: Max 70 dB

Light Sources

Continuous light source for fluorometric measurements:

1. Tungsten-halogen lamp, 75W, lifetime >300 h, Spectral range 340 - 700 nm.
2. Rotatable filter wheel A, provided with eight filter positions (Ø 15 mm). Standard high quality interference filters 340 nm, 355 nm, 390 nm, 485 nm, 544 nm. Changeable rotatable filter wheel B, provided with 4 filter positions (Ø25.4 mm)

Flash light source for TR-fluorometric Measurements:

1. UV xenon flash tube, L4642 or equivalent, spectral range 280 - 400 nm.
2. Filter slide, provided with 3 filter positions (Ø 22.4 mm). Filters 340 nm and 320 nm are fitted.

Detection Units

Fluorometry and TR-fluorometry:

1. Photomultiplier tube, R 1527
2. Emission filter slide A, provided with eight filter positions (Ø 25.4 mm) with the following filters: 405, 460, 486, 535, 590, 615 and 642 nm. Changeable emission filter slide B, provided with eight filter positions (Ø25.4 mm)

VICTOR2™ D includes: PC, monitor, necessary filters, instrument software and workstation software



DBS PUNCHER INSTRUMENT

Product Number: 1296-071

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 305 mm
Width: 420 mm
Depth: 480 mm
Weight: 24 kg

Power Requirements

Voltage/Frequency: 110 -120 V/ 220 - 240 V, 50/60 Hz

Environmental Conditions

Temperature: 15-35 °C
Relative Humidity: 20-80 %

FEATURES

Punch Diameter: 1.5 mm (1/16")
3.2 mm (1/8")
4.7 mm (3/16")
6 mm

Plate Height: 96-well plates (normal height: 14.5mm, and deep well: 44mm)

Operational control: 4 selection button for:
- operation mode selection
- plate movement
- barcode display
- operation guidance
- protocol editing

DBS Puncher

includes: 3.2 mm punch head, Floor switch,
2 adapters for standard height
96-well microplate.

Options
(sold separately):

1221-530 Workstation option includes:
workstation software, barcode
reader and cable

1296-8020 PC for DBS puncher includes:
PC and monitor



TRINEST INCUBATOR SHAKER

Product Number: 1296-0050

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 223 mm
Width: 388 mm (plate carrier out)
Depth: 310 mm
Weight: 15 kg

Power Requirements

Power Consumption Max: 160 VA
Voltage/Frequency: 100-120 V or 220-240 V,
50/60 Hz

Environmental Conditions

Operating: 15 °C to +35 °C, RH 10-75%

PERFORMANCE SPECIFICATIONS

General

Capacity: Three plates per unit, three units stackable
96-well and 384-well plates
Programmable: Up to 20 programs LCD graphics display
The three plates are processed with the same program
but can be loaded at different times
Buzzer and LED lights indicate when incubation
is complete

Incubation

Temperature Range: From 3 °C above ambient to
70 °C in 1 °C increments
Precision: ± 0.5 °C
Variation Across Plate: < 0.6 °C
Warming Speed: Less than 15 min from
+24 °C to +70 °C
Incubation Time: 0-48 h in increments of 1 min
Preheat function assuring incubation starts at
precisely the specified temperature

Shaking

Shaking Frequency: 400 - 1200 rpm (or 0 rpm) in
100 rpm increments
Precision: ± 2 %
Orbit: ~2 mm
Time: 0 - 48 h in increments of 1 min
Interval Shaking: Interval up to 60 min
in increments of 1s or 1 min



DELIA WASHER-DISKREMOVE

Product Number: 1296-0010

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 483 mm
 Width: 530 mm (plate carrier out)
 Depth: 310 mm
 Weight: 16.0 kg

Power Requirements

Power Consumption Max: 100 VA
 Voltage/Frequency: 240/100 VAC, 50/60 Hz
 Power Cord: On CEI socket

Environmental Conditions

Temperature: 15-33 °C
 Relative Humidity: 10-85 %

PERFORMANCE SPECIFICATIONS

Hardware Specifications

Manifold: 12 channels, eight channels available on request
 Vacuum: Separate vacuum unit
 Volumes of Bottles: Waste 8L, Wash 5L, Rinse 2L

Software Specifications

Protocols: Up to 100 washing protocols, up to 75 freely programmable.
 Wash Modes: Strip or Plate

VACUUM UNIT

Physical Dimensions

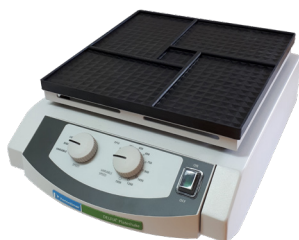
Height: 370 mm
 Width: 140 mm
 Depth: 400 mm
 Weight: 13.0 kg (approx.)

Power Requirements

Power Consumption Max: 230 VA
 Voltage/Frequency: 220-240V/100-115V, 50/60 Hz

Environmental Conditions

Temperature: 15-30 °C
 Relative Humidity: 15-85 %



DELIA PLATESHAKE

Product Number: 1296-003 /-004

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 128 mm
 Width: 245 mm
 Depth: 310 mm
 Weight: 5.5 kg

Power Requirements

Power Input: 15 W
 Voltage/Frequency:
 1296-003: 220/240V, 50/60 Hz
 1296-004: 110/115V, 50/60 Hz

Environmental Conditions

Temperature: 0-50 °C
 Relative Humidity Max: 80 %
 Suitable for use in gassing and incubating cabinets

PERFORMANCE SPECIFICATIONS

Shaking Frequency: 100 - 1350 cycles/min
 Total Stroke/Orbit: 1.5 mm
 The platform has a non-slip, removable moulded rubber pad for accommodating the microtitration plates.
 Shaking Modes: Fast, Slow or Variable



DELIA PLATE DISPENSE

Product Number: 1296-041

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 268 mm
 Width: 290 mm (plate carrier out)
 Depth: 300 mm
 Weight: 10.3 kg

Power Requirements

Power Consumption Max: 35 VA
 Voltage/Frequency: 220/240 V 50/60 Hz or 100/120 V 40/60 Hz

Environmental Conditions

Temperature: +15 – 35 °C
 Relative Humidity Max: 85 %

PERFORMANCE SPECIFICATIONS

Speed 3 min 20 sec
 Volume dispensed 200 µl per well (preadjusted)
 Accuracy better than 3% at 200 µl
 Precision better than 1% at 200 µl

DELIA DISPENSE UNIT

Product Number: 1296-043

INSTRUMENT SPECIFICATIONS

Physical Dimensions

Height: 85 mm
 Width: 150 mm (+65 mm for the bottle holder)
 Depth: 135 mm
 Weight: 2 kg

PERFORMANCE SPECIFICATIONS

Speed 2 min 20 sec for one plate
 Volume dispensed 50 or 100 µl per stroke (user adjustable)
 Accuracy better than 3% at 200 µl
 Precision better than 1% at 200 µl

ORDERING INFORMATION

Instruments

Product Number	Description
1420-020	Victor2™ D Instrument
1296-071	DBS Puncher™
1296-0050	TriNEST Incubator Shaker
1296-003	DELFI Plateshake (220/240V)
1296-004	DELFI Plateshake (110/115V)
1296-0010	DELFI Washer-Diskremove
1296-041	DELFI Plate Dispense
1296-043	DELFI Dispense Unit

Options (Sold Separately)

Product Number	Description
1420-221D	Barcode Reader
2011-0030	Laboratory Laser Printer (230 V)
2011-0040	Laboratory Laser Printer (115 V)

Consumables (Sold Separately)

Product Number	Description
3033-0010	Clear, V-bottomed Microplates (for Neonatal Phenylalanine kit) Bulk package of 100 plates
4090-0100	96-well Plate Covers
1420-450	ID-labels for 1-99, 10 sheets

Kits

Product Number	Description
A032-310	DELFI Neonatal hTSH Kit (10 plate)
A065-110	DELFI Neonatal Thyroxine (T4) Kit (10 plate)
A024-104	DELFI Neonatal 17 α -OH-progesterone Kit (4 plate)
A024-110	DELFI Neonatal 17 α -OH-progesterone Kit (10 plate)
A005-204	DELFI Neonatal IRT Kit (4 plate)
A005-210	DELFI Neonatal IRT Kit (10 plate)
NP-1000	Neonatal Phenylalanine Kit (10 plate)*
NP-4000	Neonatal Phenylalanine Kit (50 plate)*
ND-1000	Neonatal G6PD Kit (10 plate)
3029-0010	Neonatal Total Galactose Kit (10 plate)
NG-1100	Neonatal GALT Kit (10 plate)
NG-4100	Neonatal GALT Kit (50 plate)
3018-0010	Neonatal Biotinidase Kit (10 plate)
3018-001B	Neonatal Biotinidase Kit (50 plate)

*with Neonatal Phenylalanine kits need to order additional plates (3033-0010) and covers (4090-0100)

Products in this brochure may not be available in all countries. Confirm availability with your local PerkinElmer representative.

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