



VARIANT™ nbs Newborn Screening System

Confidence in newborn screening with the ease of HPLC



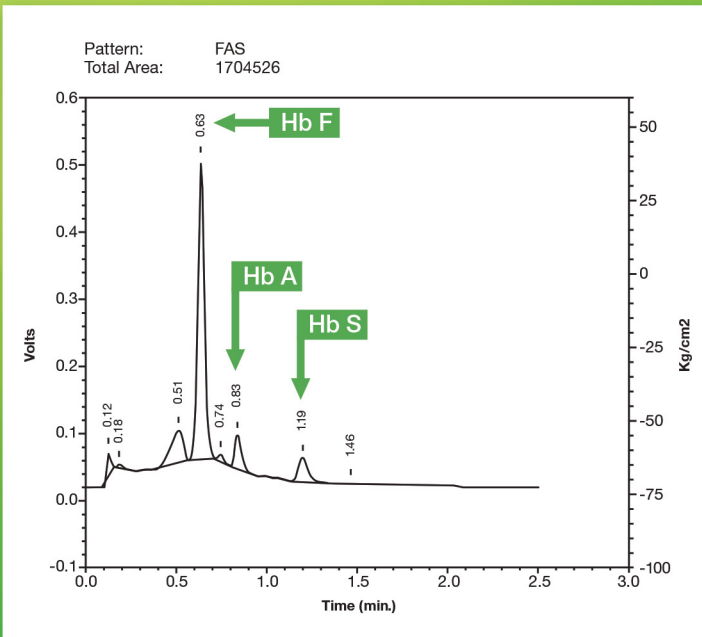
Unlock the full potential of the VARIANT™ nbs System and see the total picture.



Powerful data management

- Save time reviewing abnormal results with the pattern filter
- Reduce transcription errors by interfacing easily with laboratory information systems “LIS”
- Export the chromatogram and see more than a numerical value – See the total picture!





Each baby's future rests on the reliable newborn screening result you provide.

With the VARIANT™ nbs System, you get the total picture the first time allowing each baby to quickly receive the appropriate follow-up and care to alleviate the parents' concern.

As easy as

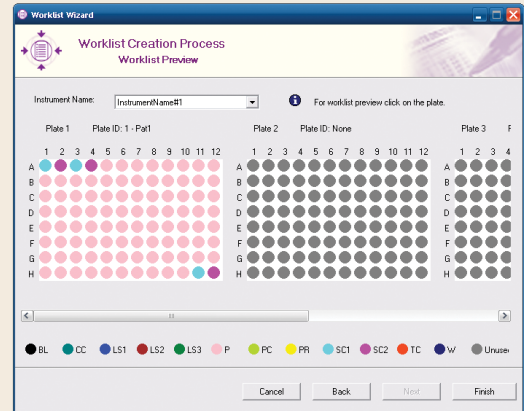
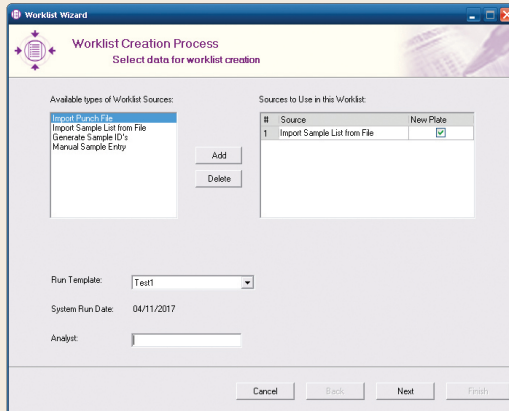


Streamlined
workflow backed
by “smart” software
for increased
efficiency with
confidence you
can trust.

1 Create a worklist

Flexibility

- Import punch files with worklist wizard from a wide variety of sources
- No puncher? Worklist wizard can generate sample IDs for you



2 Run samples

High capacity for increased productivity

- Run up to 1,128 samples per run with one click
- Fully automated operation saves time and labor

#	Plate Position	Plate ID	Well #	Type	Sample ID
1	1	System	1	BL	999-99-999
2	1	System	2	SC1	999-SC1
3	1	System	3	SC2	999-SC2
4	2	9001	1	TC	999-99-999
5	2	9001	2	P	C2_0001
6	2	9001	3	P	C2_0002
7	2	9001	4	P	C2_0003
8	2	9001	5	P	C2_0004
9	2	9001	6	P	C2_0005
10	2	9001	7	P	C2_0006
11	2	9001	8	P	C2_0007
12	2	9001	9	P	C2_0008
13	2	9001	10	P	C2_0009
14	2	9001	11	P	C2_0010
15	2	9001	12	P	C2_0011
16	2	9001	13	P	C2_0012
17	2	9001	14	P	C2_0013
18	2	9001	15	P	C2_0014
19	2	9001	16	P	C2_0015
20	2	9001	17	P	C2_0016

Number of Samples: 102

Start/Stop

Clear Worklist

New Worklist

Inject Primer

3 Report results

Simplified data management

- Pattern filter allows for faster review of abnormal results

Genetic Data Management System [Instrument #1]

Instrument 1
#1
NeoHb Ready

Instrument 2
#2
NeoHb Ready

Instrument 3
#3
NeoHb Ready

View Graphs

Setup

Run

Data

Maintain

Help

Print

14:47:21
04/11/2017

Wash: Buffer 2: Buffer 1: Flow: mL/min Genetic Data Management System [Instrument #1] °C Sampler: °C

start GDM3.2-Server Genetic Data Manage... 2:47 PM

Number of Runs: 9 Number of Samples: 20

Date	Run Number	Instrument #	Plate type	Plate Position	Plate ID	Rating
01/23/2017	2	3	Pat1	1	9001	
01/23/2017	1	3	Pat1	1	9001	Prevent
01/07/2017	2	2	Pat1	1	9001	Release
11/17/2016	3	3	Pat1	1	9001	Release
11/17/2016	2	3	Pat1	1	9001	Release
11/17/2016	1	3	Pat1	1	9001	Release

Export Results

Export to LIS From Inj # 282 To Inj # 341

Multi Selection
 On Off
Deselect All

Pattern Selection
 Select All
 Select by Text:
 Select Pattern:
FAS
FC
FCS1
FS

Select by Type: Select All
Select by Rating: Select All

Date	Run #	Instr #	Inj #	Plate Position	Plate ID	Type	Sample ID	Rating	Pattern
01/07/2017	2	2	282	1	9001	P	C1_114	Release	FAS
01/07/2017	2	2	288	1	9001	P	C1_144	Release	FAS
11/17/2016	2	3	308	1	9001	P	C2_4288		FS
11/17/2016	2	3	310	1	9001	P	C2_4290		FAS
11/17/2016	2	3	312	1	9001	P	C2_4292		FAS
11/17/2016	2	3	314	1	9001	P	C2_4294		FAS
11/17/2016	2	3	315	1	9001	P	C2_4295		FAS
11/17/2016	2	3	319	1	9001	P	C2_4299		FAS

Use the pattern filter for an easy search of all patterns found in one or across multiple plates .

Select multiple plates to display the results you want to review .

- “Smart” reports with suggested patterns based on internal rules
- Results and chromatograms can be exported to your laboratory information system “LIS”

The screenshot displays the Genetic Data Management System (GDMS) interface. On the left, there are three instrument status indicators (Instrument 1, 2, and 3) all showing 'NeoHb Ready'. A central table lists 20 samples with columns for Date, Run #, Instr #, Inj #, Plate Position, Plate ID, Type, Sample ID, Rating, and Pattern. Below the table are checkboxes for 'Expand' and 'Auto Scale'. A chromatogram plot shows 'Volts' on the y-axis and 'Time [minutes]' on the x-axis, with several peaks labeled with retention times (0.12, 0.20, 0.27, 0.46, 0.69, 0.80, 1.16). A red horizontal line is drawn at approximately 0.35 Volts. To the right of the plot is a vertical axis labeled 'kg/cm²' ranging from 0 to 100. Below the plot is a peak data table with columns for Peak Name, Height, RT, Area, and Area%. A 'Total Area: 2,166,968' is also shown. At the bottom right of the plot area, there is a button labeled 'Export to LIS'. The bottom status bar shows 'Wash: Buffer 2: Buffer 1: Flow: mL/min Pressure: kg/cm² %B Column: °C Sampler: °C' and a 'start' button.

Date	Run #	Instr #	Inj #	Plate Position	Plate ID	Type	Sample ID	Rating	Pattern
01/07/2017	2	2	282	1	9001	P	C1_114	Release	FAS
01/07/2017	2	2	289	1	9001	P	C1_144	Release	FAS
11/17/2016	2	3	308	1	9001	P	C2_4288		FS
11/17/2016	2	3	310	1	9001	P	C2_4290		FAS

Peak Name	Height	RT	Area	Area %
FAST	36543	0.12	102480	4.7
Unknown	21773	0.20	32469	1.5
F1	192083	0.27	615597	28.1
F	408219	0.46	1252067	57.3
OTHER(1)	9211	0.69	21868	1.0
A	38522	0.80	94159	4.3

Total Area: 2,166,968

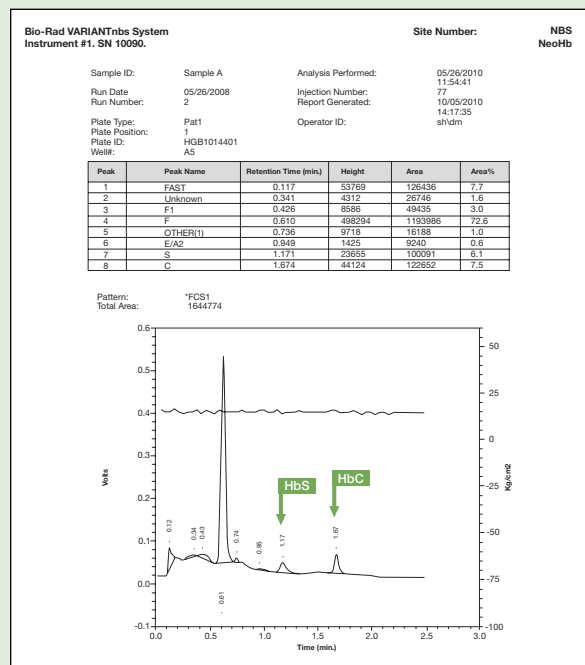
Review abnormal held results and export to your LIS in one click

Report with suggested phenotype pattern and detected fractions

Best in its class

The VARIANT™ nbs System offers:

- Walk away automation
- High capacity – up to 1,128 samples per run
- Positive sample tracking with on-board barcode reader
- Confidence with FDA clearance for dried blood spot samples
- High resolution separation with Bio-Rad HPLC
- “Smart” reports with suggested patterns
- Easier results review with the pattern filter
- Streamlined workflow with results and chromatograms export to LIS



Example chromatogram showing a double heterozygote with peaks presenting in both the HbS and HbC windows.

The VARIANT™ nbs System is the established worldwide standard in automated newborn screening for sickle cell disease and other hemoglobin disorders:

- Detects presence of hemoglobins (F, A, S, D, C, E) that are clinically significant for identification of the presence of:
 - hemoglobin disorders
 - carrier status for abnormal hemoglobins
 - double heterozygote conditions

Ordering Information

Catalog No. Description

250-3010	VARIANT™ nbs Newborn Screening System	110V/220V
12000136	VARIANT™ nbs GDM Workstation Computer	1 unit
250-3000	VARIANT™ nbs Sickle Cell Program Reorder Pack	1000 tests
270-2392	LCD 17" Monitor	1 unit



**Bio-Rad
Laboratories**

For further information, please contact the Bio-Rad office nearest you or visit our website at www.bio-rad.com/diagnostics

Clinical
Diagnostics Group

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