

Committed
to giving
babies a
better chance
at life.



revvity

NeoBase™ 2 Non-derivatized MSMS kit



Advancing and enhancing newborn screening

Revvity, a global leader in mass spectrometry based newborn screening, continues to innovate and collaborate with science community professionals.

This next generation NeoBase™ 2 Non-derivatized MSMS kit aims to expand newborn screening for more disorders in a highly simplified three-step workflow. It offers an efficient, cost-effective solution to increase screening capabilities without requiring additional equipment or resources.



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Advance your newborn screening service

- 1** Screen for over 50 analytes, including X-ALD and ADA SCID markers, using just one dried blood spot (DBS) punch. This simplified process involves a single extraction and incubation step.
- 2** Your time is precious! - shorter extraction time, shorter incubation time and shorter run time.
- 3** Reconstitution is made easy with all internal standards conveniently placed in a single vial. The extraction working solution remains stable for up to two weeks, eliminating the requirement for daily preparation.
- 4** DBS quality controls with analyte concentrations adjusted at clinically significant levels.





The components you need for effective newborn screening

20 U-bottomed microplates

ANSI-standard U-bottomed microplates

20 sheets of adhesive microplate covers

Easy-to-use adhesive covers for all assay steps

NeoBase™ 2 internal standards

All 30 internal standards provided in a single vial

Controls

Kit controls, Low and High. Three filter paper cassettes containing 3 spots of each level per cassette.

Lot specific quality control certificate

The exact concentrations of isotope labeled internal standards measured by the manufacturer are given on the lot-specific quality control certificate included in the kit.

NeoBase™ 2 Non-derivatized Assay Solution

The package includes a bottle of each of extraction solution and flow solvent.

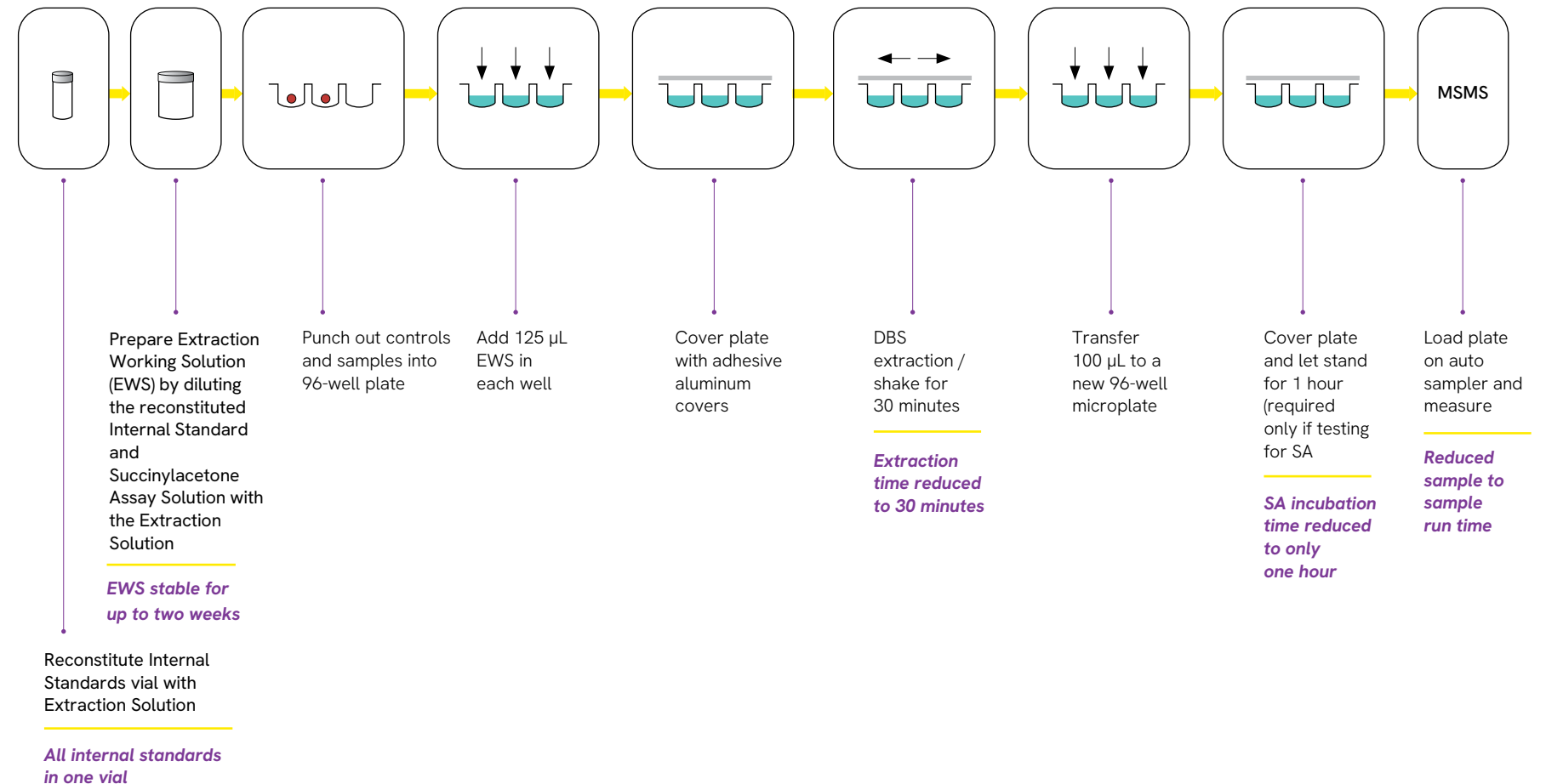
NeoBase™ 2 Succinylacetone Assay Solution

Optional reagent for the detection of succinylacetone when screening for tyrosinemia type I is desired.





A streamlined and expedited assay workflow





More analytes, improved performance, better productivity

Table 1. Analytes measured by the NeoBase™ 2 Non-derivatized MSMS Kit and their corresponding internal standards and controls.

Amino Acids

| Analyte | Internal standards | Controls |
|----------------|---|----------|
| Ala | ² H ₃ -Ala | Ala |
| Arg | ² H ₄ / ¹³ C-Arg | Arg |
| Asa* | ² H ₄ / ¹³ C-Arg | Asa |
| Cit | ² H ₂ -Cit | Cit |
| Gln | ¹³ C ₅ -Gln | Gln |
| Glu | ¹³ C ₆ -Gln | Gln |
| Gly | ¹⁵ N, ² - ¹³ C-Gly | Gly |
| Leu/Ile/Pro-OH | ² H ₃ -Leu | Leu |
| Met | ² H ₃ -Met | Met |
| Orn | ² H ₆ -Orn | Orn |
| Phe | ¹³ C ₆ -Phe | Phe |
| Pro | ¹³ C ₅ -Pro | Pro |
| Tyr | ¹³ C ₆ -Tyr | Tyr |
| Val | ¹⁵ N- ¹³ C ⁵ -Val | Val |

*Asa is measured as a total concentration of Asa and its anhydrides.

Ketones

| Analyte | Internal standards | Controls |
|---------|-------------------------------------|----------|
| SA | ¹³ C ₅ -MPP** | SA |

** Stable-isotope labeled succinylacetone (SA) derivative 3-(5-methyl-1H-pyrazol-3-yl) propanoic acid (MPP).

Nucleosides

| Analyte | Internal standards | Controls |
|---------|------------------------------------|----------|
| ADO | ¹³ C ₅ -ADO | ADO |
| dADO | ¹³ C ₅ -dADO | ADO |

Phospholipids

| Analyte | Internal standards | Controls |
|------------|--------------------|-----------|
| C20:0 LPC* | 2H4-C26:0 LPC | C26:0 LPC |
| C22:0 LPC* | 2H4-C26:0 LPC | C26:0 LPC |
| C24:0 LPC | 2H4-C26:0 LPC | C26:0 LPC |
| C26:0 LPC | 2H4-C26:0 LPC | C26:0 LPC |

* Not included in the US specific kit version 3044-001U.

Carnitines

| Analyte | Internal standards | Controls | Analyte | Internal standards | Controls |
|-----------|--------------------|----------|---------|--------------------|----------|
| C0 | 2H9-C0 | C0 | C14 | 2H3-C14 | C14 |
| C2 | 2H3-C2 | C2 | C14:1 | 2H3-C14 | C14 |
| C3 | 2H3-C3 | C3 | C14:2 | 2H3-C14 | C14 |
| C3DC/C4OH | 2H3-C4 | C4 | C14OH | 2H3-C14 | C14 |
| C4 | 2H3-C4 | C4 | C16 | 2H3-C16 | C16 |
| C4DC/C5OH | 2H9-C5 | C5 | C16:1 | 2H3-C16 | C16 |
| C5 | 2H9-C5 | C5 | C16OH | 2H3-C16 | C16 |
| C5:1 | 2H9-C5 | C5 | C16:1OH | 2H3-C16 | C16 |
| C5DC/C6OH | 2H6-C5DC | C5DC | C18 | 2H3-C18 | C18 |
| C6 | 2H3-C6 | C6 | C18:1 | 2H3-C18 | C18 |
| C6DC | 2H6-C5DC | C5DC | C18:2 | 2H3-C18 | C18 |
| C8 | 2H3-C8 | C8 | C18OH | 2H3-C18 | C18 |
| C8:1 | 2H3-C8 | C8 | C18:1OH | 2H3-C18 | C18 |
| C10 | 2H3-C10 | C10 | C18:2OH | 2H3-C18 | C18 |
| C10:1 | 2H3-C10 | C10 | C20* | 2H3-C26 | C26 |
| C10:2 | 2H3-C10 | C10 | C22* | 2H3-C26 | C26 |
| C12 | 2H3-C12 | C12 | C24* | 2H3-C26 | C26 |
| C12:1 | 2H3-C12 | C12 | C26* | 2H3-C26 | C26 |



Improved for even better expanded screening

Main new features compared to the NeoBase™ non-derivatized kit are:

- New analytes: amino acids (ASA, Glu, Gln), acylcarnitines (C18:2OH, C20- C26*), lysophospholipids (LPC20:0, LPC22:0*, LPC24:0, LPC26:0), nucleosides (Ado, dAdo)
- New single all-in-1 Internal Standards vial: Easier preparation and improved extraction working solution stability (2 weeks instead of 1 day)
- New kit controls with 2 clinically optimized levels (Low, High)
- New single ANSI-standard plate and easy-to-use adhesive plate cover for all assay steps
- Non-derivatized Assay Solutions: New high quality borosilicate glass bottles, new Flow Solvent with lower MSMS background
- Succinylacetone Assay Solution: Faster succinylacetone (SA) extraction step with 60 min shorter waiting time





Manage, review, and report results



Complete new software for managing, reviewing and reporting results

- Import data from instrument software: concentrations, IS intensities and TIC raw data
- Visualize results:
 - Plate map with colored wells
 - Flagging of wells violating cutoffs or other QC criteria
 - View TIC and spectra
 - View results by disorder
 - Split grid view for easy review of results
- SQL server database to store and consolidate data from one or more MSMS instruments
- Perform QC trend analysis and reporting
- Sample and assay audit tracking
- Automatic export to R4S for analysis
- Export results to LIMS



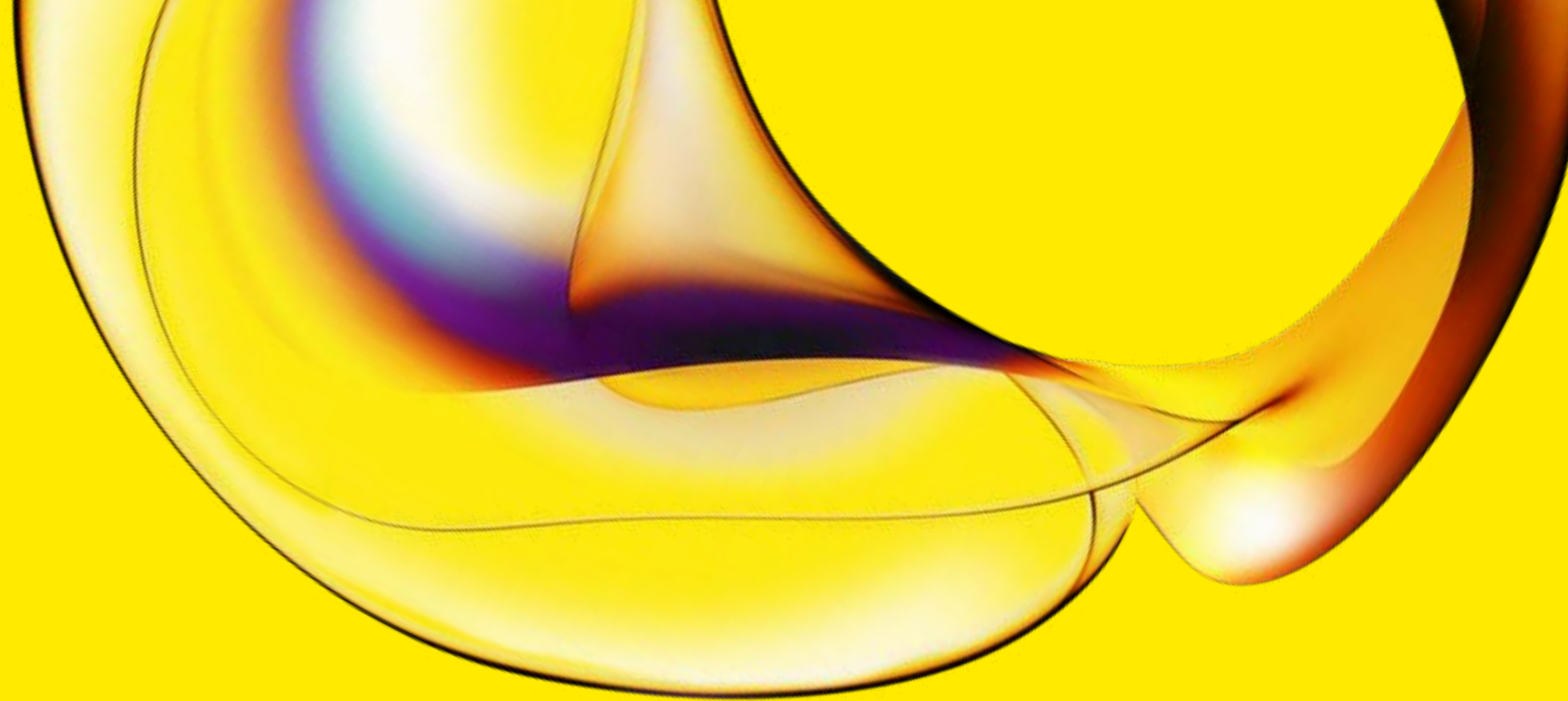
Complete mass spectrometry solutions, powered for newborn screening

A community of support

From dried blood spot cards, punchers, instruments, reagents to software, our mass spectrometry solutions empower newborn screening laboratories across the globe to meet their demands.

By joining the Revvity newborn screening community, you become part of a movement that includes the majority of the newborn screening laboratories and leaders worldwide. In addition to all necessary equipment, reagents and informatics, we also provide on-site installation and training, ongoing support, phone consults and various training courses. We are here to help you improve your newborn screening program.





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