



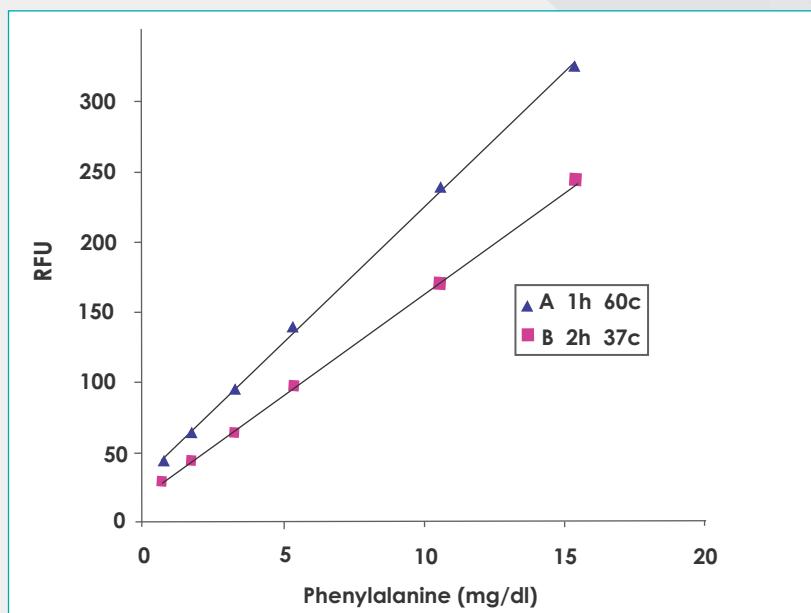
# Newborn screening of Phenylketonuria

Fully quantitative fluorometric screening kit for PKU

- Simple and easy to perform
- Excellent analytical sensitivity
- Extensive experiences from worldwide customers
- Calibrated against international reference preparations

# Neonatal Phenylalanine

Neonatal phenylalanine assay is a chemical method intended for the quantitative determination of phenylalanine from dried blood spots. Phenylalanine eluted from dried blood spots forms a fluorescent compound with ninhydrin. The fluorometric response is greatly enhanced by the presence of a dipeptide L-leucyl-L-alanine. The pH during the reaction is strictly controlled by succinate buffer at  $5.8 \pm 0.1$  in order to optimize fluorescence and maximize specificity. Copper reagent is added to stabilize the fluorescent complex and enhance the signal. Fluorescence is measured with at 485 nm (excitation wavelength being 390 nm). The assay is calibrated against the European Working Standard for Phenylalanine (EWS-Phe) since 1996 and the 1st ISNS Reference Preparation for Neonatal Screening for TSH, phenylalanine and 17 $\alpha$ -hydroxyprogesterone in blood spots since 2005.



## PKU Test procedure

1. Punch 3 mm sample disks, add 80  $\mu$ l elution buffer
2. Incubate 30 min at RT on a shaker
3. Transfer 50  $\mu$ l eluate, add 50  $\mu$ l incubation mixture.
4. Incubate A) 1 h at 60 °C or B) 2 h at 37 °C
5. Add 200  $\mu$ l copper reagent
6. Incubate 15 min at RT
7. Measure at ex. 390 nm, em. 485 nm

Comparison of calibration curves using two procedures and with linear regression curve fitting.

Cat.no.	Product name	Plate type	Packing size	Regulatory status
6199895	Neonatal PKU, fluorometric test	96-well solid	480 wells	CE marked
6199896	Neonatal PKU, fluorometric test	96-well solid	960 wells	CE marked
6199897	Neonatal PKU, fluorometric test	96-well solid	4800 wells	CE marked
6190930	Neonatal Phenylalanine Controls		5 sets of 3 levels	CE marked
6190940	Neonatal Phenylalanine Calibrators		5 sets of 5 levels	CE marked

Type 903 filter paper is used in all products.

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