

NEWBORN SCREENING KITS



Neonatal Phenylalanine

Trimaris Neonatal Phenylalanine is a fluorometric kit developed for neonatal phenylketonuria screening, through quantitative analysis of phenylalanine on dried blood spots (DBS).

In this chemical method, phenylalanine is initially eluted from the dried blood spot samples. Phenylalanine in the eluate then reacts with the Reagent A/B/C mixture to generate a fluorescent compound. Final addition of Reagent D strengthens and stabilizes the fluorescent signal, whose intensity is then measured by a fluorometer with appropriate wave length settings (Excitation wavelength: 390 nm, Emission wavelength: 485 nm). Phenylalanine concentration in the tested dried blood spot samples (mg/dl) is quantitatively determined using the standard curve that is drawn according to the signals obtained from the calibrator DBS samples provided within the kit.

Neonatal TSH FEIA

Trimaris Neonatal TSH FEIA is a fluorometric enzyme immunoassay kit developed for congenital hypothyroidism screening, through quantitative determination of Thyroid Stimulating Hormone (TSH/thyrotropin) on dried blood spots (DBS). Trimaris Neonatal TSH FEIA, is a solid-phase sandwich immunoassay where TSH is captured and detected by distinct monoclonal antibodies. In this method, TSH hormone is initially eluted from the dried blood samples and captured by the anti-TSH monoclonal antibody immobilized on the FEIA plates. Unbound molecules are washed away, and the captured TSH is bound by a secondary anti-TSH monoclonal antibody that is conjugated with HRP enzyme. Following the removal of the unbound antibodies, the plates are incubated with a fluorogenic substrate to generate a fluorescent signal whose strength is proportional to the quantity of the captured TSH. Finally, the enzyme reaction is stabilized by addition of the Stop Buffer and the fluorescent signal intensity is measured by a fluorometer with appropriate wave length settings (Excitation wavelength: 320 nm, Emission wavelength: 405 nm). TSH concentration in the tested dried blood spot samples (μ IU/ml) is quantitatively determined using the standard curve drawn according to the signals obtained from the calibrator DBS samples provided within the kit.

Neonatal Fluorometric Biotinidase

Trimaris Neonatal Fluorometric Biotinidase is a fluorometric kit developed for screening of neonatal biotinidase deficiency through semi-quantitative determination of biotinidase activity on dried blood spots (DBS).

Upon addition of the substrate buffer, biotinidase enzyme is initially eluted from the dried blood spot samples. Eluted biotinidase enzyme then reacts with the "Biotin 6 - aminoquinoline" substrate in the buffer; leading to the formation of the fluorometric "6 - aminoquinoline" product. Finally, enzymatic activity is stopped by ethanol addition; and the stabilized fluorescent signal whose strength is proportional to the amount of Biotinidase enzyme in the tested samples is measured by a fluorometer with appropriate wave length settings (Excitation wavelength: 360 nm, Emission wavelength: 460 nm). Biotinidase enzyme concentration in the tested dried blood spot samples (U) is semi-quantitatively determined using the standard curve drawn according to the signals obtained from the calibrator DBS samples provided within the kit.



TRIMARIS



CE

Code	Description	Packing
BR071200	Neonatal TSH EIA Kit	960 Tests
BR071201	Neonatal TSH EIA Kit	4800 Tests
BR071210	Neonatal TSH FEIA Kit	960 Tests
BR071211	Neonatal TSH FEIA Kit	4800 Tests
BR071190	Neonatal Biotinidase Reagent Kit	4800 Tests
BR071220	Neonatal Fluorometric Biotinidase Kit	4800 Tests
BR071230	Neonatal Phenylalanine Kit	3840 Tests

