Preemie Health

Collaborative Intelligence, Personalized Preterm Care

Helping Preterm Babies Get a Healthy Start In Life

Reduces the time for preparation and feeding, to lower costs

Minimises errors in the milk management and fortification process

Improves health outcomes by personalising infant nutrition

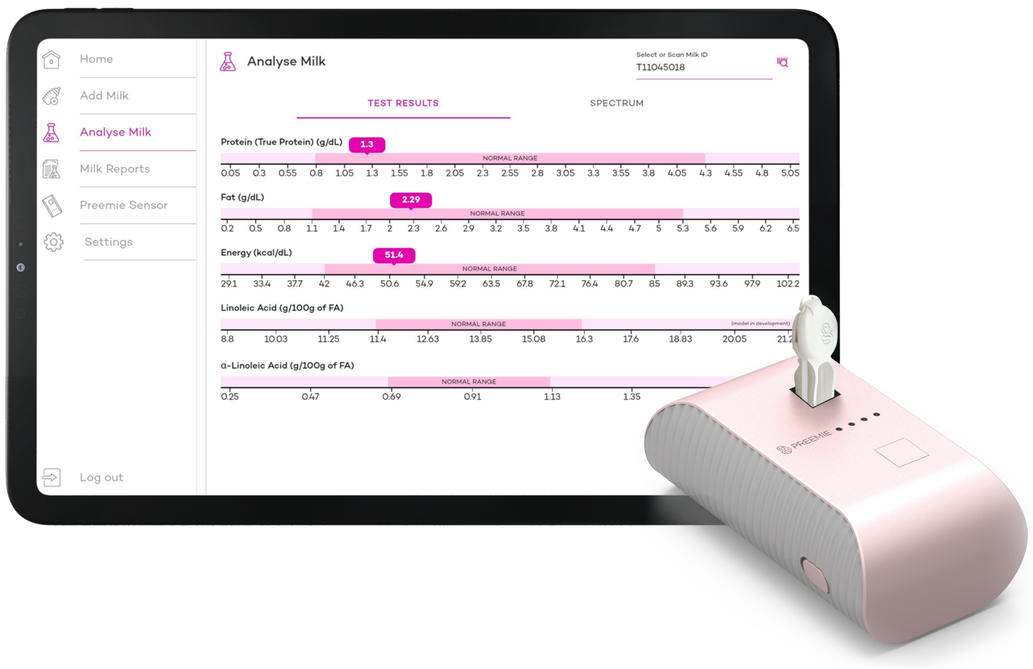
Enables exact fortification prescription based on the infant's growth history correlated with nutritional intake

How Preemie Sensor Works

The operations to analyse the milk are simple and fast: place a couple of drops of homogenized breast milk in the cuvette provided with the sensor, close it, and then insert it into the sensor. Upon pushing the scan button the light spectrum and the nutritional values of the analysed milk appear in the software in a few seconds.

What Preemie can Measure

TOTAL PROTEIN grams/100 mL	**TOTAL LIPIDS** grams/100 mL	**ENERGY** kcal/100 mL	**ARACHIDONIC ACID (ARA)** g/100g of total fatty acids	**DOCOSAHEXAENOIC ACID (DHA)** g/100g of total fatty acids	**LINOLEIC ACID (LA)** g/100g of total fatty acids	**A-LINOLENIC ACID (ALA)** g/100g of total fatty acids
The content of actual **protein** is a key value for targeted milk fortification, since it is the one contributing the most to the infant's growth.	**Fat** is crucial for the development of the infant's neurological system.	**Caloric intake** is key for the development of the baby and is calculated from the content of various components.	**ARA** is often supplemented with DHA, and is crucial for brain and eye development. It improves respiratory outcomes and linear growth, and reduces the risk of severe retinopathy of prematurity (ROP).	**DHA** offers benefits for preterm brain and eye development, and reduces the risk of certain diseases like bronchopulmonary dysplasia (BPD) and necrotizing enterocolitis (NEC).	Preterm infants convert **LA** and ALA into longer-chain polyunsaturated fatty acids (LCPUFAs) like DHA, which is a critical component of brain and retina development.	Preterm infants convert LA and **ALA** into longer-chain polyunsaturated fatty acids (LCPUFAs) like DHA, which is a critical component of brain and retina development.



The Preemie Sensor is operated by either the Milk Analysis Mobile application or by SpecData mobile application.

Preemie Sensor Specifications

Weight: 300 g

Cuvette Well: 12.5 x 12.5 x 35 mm

Analytical Method: Near-infrared transmissive spectroscopy

Wavelength Range: 1350 nm to 2150 nm

Resolution (FWHM): 10 nm

Illumination Source: One integrated tungsten halogen lamp, 0.7 W

SNR: > 5000:1 for 1-second scan

Monochromator: Plane grating and TI DMD DLP2010NIR, 854×480 pixels

Detector: Single element 1 mm InGaAs detector, uncooled

Scan Pattern: 256 equally-spaced columns

Total Scan Time: 6 sec

Connectivity: Bluetooth Low Energy (wireless)

Preemie App: Android, with Internet connection

Power: USB (500 mA @ 5 V) to charge integrated Li-ion battery

Ambient Temperature, operating: +10°C to +40°C

Ambient Humidity, operating: 10 % to 80 % relative humidity, non-condensing

For More Information visit our website at Preemie.Health or email Info@PreemieSystem.com

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