

NEONATAL INCUBATORS

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Premature birth of a child is one of the contemporary problems. Being born too soon – when the lungs, brain and other organs have not yet developed – can make babies highly vulnerable. Therefore, saving optimal temperature conditions of the environment in the first days of life is essential for the full development of premature neonates. Babies are prone to cooling; they are also can be quickly and easily overheated because of external warming [1]. Nowadays, the actual task is to improve and to develop new incubators (cuvettes for newborns), thus saving time to compensate the heat loss of the child.

Cuvette is a box made of a transparent glass that contains a heating element. Incubators usually are equipped with air humidification devices, regulated by the control unit [2]. Incubators for newborns are mainly made from organic glass or similar materials, which are stable during chemical disinfection. In addition, an artificial lung ventilation equipment is usually built-in. A constant body temperature of infants and necessary humidity level are maintained with manual or automatic control inside the incubator.

Premature babies are mostly prone to respiratory diseases, so there is a need for respiratory comfort system inside a cuvette. The medical dispersion is a must too. This will ensure the penetration of healing aerosol to the upper respiratory tract and will support necessary temperature level and humidity conditions.

The first few minutes, hours, days are crucial for the development of baby's health. This is why an oxygen-regulated cuvette with a system of automatic support and controlled parameters, such as temperature, humidity etc. should be developed which can result in more reliable and comfortable work of neonatologists and nurses.

Literature

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