

Technical Data Related to Sterilin® Petri Dishes

Petri Dishes 90mm Standard (considered 100mm standard in USA)

- Used by microbiologists to culture micro-organisms on solid media
- Aseptically manufactured under clean room conditions (class 7 ISO14644) to exclude microbiological contamination
- CE marked in accordance with European Directive 98/79/EC
- In vitro use only
- Produced and tested in accordance with the BS611 part 2 standard, which includes stringent dimensional control
- Ideal for use in automatic plate pourers
- Available in single, triple and non-vented formats
 - Triple vented - aids gaseous exchange. Ideally suited for short term work
 - Single vented limits gaseous exchange, minimizes evaporation and dehydration. Ideally suited for long term work
 - Non-vented - most suitable for anaerobic and long term work
- Manufactured from virgin polystyrene
- Mirror finished moulds ensure high optical clarity

Petri Dishes

Sterilin 90mm, 140mm and 100mm square Petri dishes are manufactured in accordance with the British Standard 611 part 2. With stringent dimensional controls, we can ensure product quality and consistency making them ideal for use with most automatic plate pourers.

Basic criteria with associated benefits are as follows:

Specification	Benefit
Free from discoloration and weld marks	Good optical quality
Consistent dimensions without rough edges	Will fit plate pourers, safe to use
Minimum vent height	Adequate gas flow -consistent results
Rigidity to resist excessive deformation when handled	No distortion in use
Must not distort at 60°C	Pour with hot agar
Must resist fracture up to 19.61N	Reduced risk of breakage
Stability - incline stack to 12 degrees	Safe and easy to use
Free from loose particles greater than 100um in diameter	No false positives when using automatic colony counters
Manufacture must be by aseptic means	Assured level of sterility
All packaging must be clearly marked with the manufacturers mark, BS611, and "in vitro use only"	Visible guarantee of a quality



Sterility, Aseptic Manufacture

The term 'aseptic' refers to methods and procedures designed to prevent the access of living or dead bacteria, fungi, viruses and other biological contamination, so that products or work areas are maintained in a biologically clean condition. Petri dishes, containers and multiwell plates are examples of Sterilin products that are aseptically manufactured. During production, virgin polystyrene is subjected to temperatures in excess of 200°C and then injected into the mould at high pressure. These exacting conditions ensure a biologically clean product. Subsequent assembly and packaging is carried out by trained operators under cleanroom conditions (class 7, maintained as per BS EN ISO14644) to exclude any microbiological contamination. Stringent microbiological sampling of both the cleanroom environment and finished product ensures extremely clean product with a very high Sterility Assurance Level (SAL)

Sterility, Irradiation

Irradiation is a method of sterilization which involves subjecting the finished product and its packaging to ionizing radiation. The radiation breaks down DNA and so destroys living organisms. Barloworld Scientific uses gamma irradiation for the sterilization of products which are complex to manufacture under aseptic conditions. These include Sterilin pipettes and microtitration plates. Products that have been subjected to sterilization via irradiation are usually denoted by a red indicator on the packaging.

Sterility, Sterility Assurance Level (SAL)

Sterility can be defined in terms of the "probability" of a microorganism being present on the product. For a medical device to be labeled "Sterile", the probability that a viable organism is present on the device must be less than or equal to 1×10^{-6} (1 colony per 1,000,000 product). This equates to a Sterility Assurance Level of 6.

For aseptically manufactured product the probability that a viable organism is present on the product is less than or equal to 10^{-3} (1 colony per 1,000 product). This equates to a Sterility Assurance Level of 3.

