

The background of the entire page is a dark, deep purple or black, filled with a bokeh effect of out-of-focus, colorful lights. The lights are in various colors including yellow, orange, red, blue, green, and white, creating a vibrant, starry pattern. The lights are of varying sizes and brightness, with some appearing as sharp, bright circles and others as softer, more diffused blurs.

4titude[®]

innovations
for life sciences

14/15

NEW Product Highlights

Latest Innovations

This is a selection of our new products, which are a result of our on-going research and development programme.



4LAB™

High precision liquid handling robot is now available with UV light and HEPA filter, see page 56

Automatic 4 Sealer A4S

Automatic 4 Sealer for high-throughput plate sealing, see p 62



Tear-A-Way™

Tear-A-Way™ plate for most flexible and efficient use of a PCR plate, see page 32.

About us

4titude[®] Ltd is a young and dynamic company founded in 2005 by Peter Collins, Paul Day and Thomas Lernbecher. Working today as directors of 4titude[®] they have brought years of experience in developing PCR plastics, reagents and instrumentation from their previous positions, as owners and employees at ABgene. Together they have an understanding of customer needs, clean room manufacturing and product development specific to the life science market. With 4titude[®] they aim to develop further intelligent consumables and incorporate the new products into our current customer focused product range.





The launch of the 4titude® FrameStar® range of two-component PCR plates, in 2006, marked the beginning of the ongoing success story that is 4titude®. This range is now the most comprehensive of two-component (polycarbonate frame) consumables in the life sciences market with the recent additions of our patented Framestrips™ and dividable Break-A-Way plate.



Another area of special expertise is plate sealing solutions. 4titude® offers the widest range of sealing films and foils on the market to meet the highest customer expectations and continues to work on innovative sealing solutions for sealing applications in the life sciences market.

4titude® provides expertise for innovation to customers with specific needs, either under our own brand or as an OEM agreement. This covers all steps from custom toolmaking, design and injection moulding services to barcoding and labware calibration.

In recent years there has been a steady growth in 4titude® sales which has allowed us to invest in the highest quality manufacturing facilities with ISO 9001 certified processes and UK ISO7 and ISO8 clean room production according to ISO14644-1. To ensure the best results for our customers products are tested at every manufacturing step and we adhere to strict quality guidelines.





SiLA Rapid Integration®

4titude® also embraced the latest developments in lab automation and joined the SiLA (Standardization in Lab Automation) consortium, working towards SiLA compliance of our instruments and consumables.

We at 4titude® are pleased to present in this catalogue our new Automated-4-Sealer (A4S) as well as the 4LAB automated high-precision pipetting system. Two new products that show our ongoing commitment to new technologies and innovations for life sciences.



Manufacturing

ISO Certified Manufacturing

4titude®'s manufacturing standards comply with DIN EN ISO 9001:2008

Precision Tool Design

4titude®'s highly skilled engineers have extensive knowledge and experience in the design and manufacture of precision tools. Injection moulding of thin walled and other laboratory consumables is to tight tolerances. The latest technology is used by 4titude® for tool making, resulting in precision components of outstanding quality.

Our injection moulding tools undergo regular inspection and maintenance schedules to ensure that all parts can be moulded consistently and to the highest standards.

Cleanroom Injection Moulding - Class 7 ISO Certification

Our cleanroom production in the UK has achieved class 7 ISO certification, which indicates that a 10 fold lower amount of air particles is present compared to the manufacturing standards of most other PCR plate manufacturing companies. Class 7 cleanrooms are usually only required for the production of biopharma products, sterile pharmaceuticals, medical devices and implants. This certification ensures the products remain free from particle contaminations, such as bacterial and eukaryotic cells, dust or pyrogens.

Virgin, Medical Grade Polymers

4titude® uses medical grade and fully biocompatible polymer granulates in all our processes. As an additional measure of bio-safety we only work with virgin materials and avoid the use of mould release agents or other additives, which may have a detrimental effect on product purity.

ISO Quality

4titude® currently holds an ISO 9001:2008 certificate. In 2014 4titude® expects to add ISO 13485 accreditations to their manufacturing quality standards.



Quality Control

4titude® plastic consumables undergo a wide range of QC inspections during and after the production process. We perform visual, physical and biological tests to ensure both the absence of contaminants, as well as the integrity of the products at all times. Tests include:



100% Inspection

Using a proprietary electrical discharge detection method we test every plate for its well integrity. Due to the sensitivity of this test we can guarantee for the absence of pin holes and knit lines which could otherwise lead to loss of valuable samples during DNA amplification (PCR plates only).

Visual Inspection

All plate types are visually inspected for moulding defects, impurities and for batch to batch consistency. Using state-of-the-art measuring equipment we verify that all parts have been produced to our own published tolerances, or to industry standard specifications where appropriate (e.g. according to SBS standards).

Biological Testing

We perform functional QC testing using quantitative PCR (qPCR), to ensure that all products are free from nucleases (DNases & RNases) and pyrogens, as well as human genomic DNA. LAL-Assays are used to test raw materials and finished product for the presence of endotoxins.

PCR Performance Test

PCR plate samples undergo thermal cycling for leak testing under extreme temperature conditions. At the same time the plates are tested for sealing performance using heat seals, adhesive seals and cap strips.