



integrin

Integrin Services Technical Note

The joint ownership and management of Biobest Laboratories and Integrin Advanced Biosystems gives the group the capability to offer additional analytical and microbiology services to the pharmaceutical industry.

The Director of the Integrin laboratory Dr Alastair Hamilton is experienced in both conventional bacteriology techniques and molecular genetics and is supported by a team experienced in liquid chromatography and mass spectrometry.

Integrin currently offer routine bacteriology testing services to the sea fish and shellfish industries and Food standards agency. Techniques can be adapted or developed to support a wide range of contract research aims.

For analytical chemistry Integrin is well equipped with several detection type systems:

- i) High Performance Liquid Chromatography (HPLC) four complete systems with a variety of detectors including photodiode array (PDA) ultraviolet (UV) absorbance detection, fluorescence detection, Tandem Mass Spectrometry Mass Spectrometry ((MS/MS) (Micromass Quattro Micro)) detection.
- ii) Plate Readers with UV/VIS and fluorescence type detection.

HPLC-MS/MS is the method of choice for the measurement of novel pharmaceutical products (less than 2000 atomic mass units molecular weight) due to high selectivity and versatility to measure a wide range of compounds. To develop and validate an assay requires provision of a certified test material. This material is then used to produce a stock solution and subsequently develop/validate an assay. Optimisation of the HPLC-MS/MS system is straightforward and can be performed within a day giving a very quick idea of limits of quantification and therefore feasibility of the assay without committing to further method development or validation. Several types of study can be supported included but not limited too:

- i) Residue analysis in milk, meat, cheese etc to assess the clearance of novel drug candidates
- ii) Plasma and urine analysis to support DMPK type studies.
- iii) Development and validation of HPLC-MS/MS type assays to be adopted elsewhere.



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Integrin is not currently GLP accredited but could seek accreditation if required by the client. The laboratories are United Kingdom Accreditation Service (UKAS) accredited and operate under a defined quality management system to ISO 17025-2005 audited annually by UKAS. For sample receipt and storage Integrin logs in its samples in a controlled manner with the appropriate sample and freezer logs to provide full traceability.