

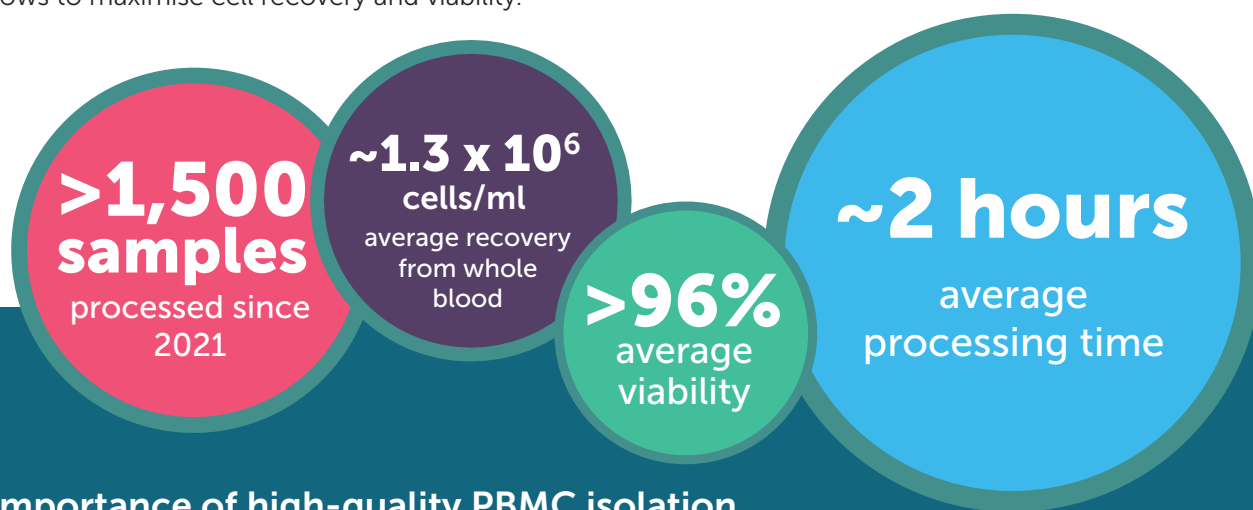
PBMC isolation: Delivering high-quality samples for clinical research



Peripheral Blood Mononuclear Cells (PBMCs) play a vital role in modern clinical research, particularly in immunology, oncology, cell and gene therapy, and biomarker discovery studies. The quality of the PBMCs isolated can have a significant impact on downstream analyses, making expertise, consistency, and speed critical factors in clinical trial success.

At Pharmagene® Discovery Services, we have extensive experience supporting UK-based clinical trials through specialist PBMC isolation services, transforming time-sensitive patient samples into high-quality cellular products ready for advanced analytical applications.

We routinely isolate PBMCs from both whole blood samples and leukopaks as well as Bone Marrow Mononuclear Cells (BMMCs) from bone marrow aspirate. Cellular subsets (using Miltenyi Biotec's Magnetic Cell Separation MACS® technology) and plasma can also be isolated. With extensive hands-on experience processing samples from clinical trial participants, we understand the unique challenges associated with each sample type and apply optimised workflows to maximise cell recovery and viability.



The importance of high-quality PBMC isolation

PBMCs are frequently used to assess immune responses, identify biomarkers, and support the development of novel therapeutics. However, maintaining cell viability, recovery, and functionality requires careful handling from the moment samples arrive at the laboratory.

Operating under Good Clinical Laboratory Practice (GCLP) and supported by a robust Quality Management System, our dedicated clinical sample processing team can follow a variety of established procedures designed to preserve sample integrity and ensure consistent, reliable results.

To ensure consistency and data integrity, we utilise automated cell counting technology to provide accurate and reproducible cell enumeration and viability

assessments. All samples are managed through a robust sample management process, providing complete traceability and a comprehensive audit trail from receipt through processing, storage, and final disposition. In addition, all sample storage environments are subject to continuous temperature monitoring, ensuring the integrity of valuable clinical specimens is maintained throughout their lifecycle.

With an average recovery of ~1.3 x 10⁶ PBMCs/ml from clinical whole blood samples and an average viability of >96% following processing, you can be confident that your samples are in safe hands and that downstream assays will most accurately reflect the biological characteristics of the patient population being studied.

Flexible isolation approaches to meet study requirements

Every clinical study has unique objectives, and a single processing methodology is rarely suitable for all applications. To meet these requirements, our team is experienced in a range of density gradient separation methods utilising:

- SepMate™ technologies
- Traditional overlay method
- Underlay method
- LeucoSEP™ technologies
- Cell Preparation Tubes (CPT)

These capabilities allow us to tailor processing methodologies to the specific needs of each study, ensuring samples are prepared appropriately for downstream applications such as flow cytometry, functional immune assays, biomarker analysis, cell-based testing, and translational research programmes.

Supporting clinical trials with confidence

Successful PBMC processing requires more than technical expertise. It demands robust quality controls, precise sample handling, and the ability to process specimens within strict timelines. Pharmagene has established the infrastructure, processes and experienced personnel needed to support these critical requirements.

Our typical time to begin processing is less than 1.5 hours following receipt. Pharmagene is committed to customer care and expedited timelines can be discussed if needed. Once processing has commenced, this is usually completed within 2 hours depending upon the method selected. Out of business hours processing is also available to meet defined timelines.

By combining scientific expertise with operational excellence, we help clinical trial sponsors and research organisations obtain high-quality PBMC samples that generate reliable data and support informed decision-making throughout the drug development process.



Your trusted PBMC processing partner

As the use of immune-based therapies and precision medicine continues to grow, the demand for high-quality PBMC samples has never been greater. At Pharmagene, our specialist PBMC isolation capabilities, commitment to quality, and extensive experience with clinical trial samples enable us to deliver the reliable cellular products researchers need to advance therapeutic innovation.

From sample receipt through to final isolation, cryopreservation and storage, we provide a seamless PBMC isolation service designed to support the success of your clinical programme.

Contact our team to discuss your project requirements.



PHARMAGENE DISCOVERY SERVICES LIMITED

2a Orchard Road, Royston, Herts SG8 5HA

Pharmagene® is a registered trademark of Pharmagene Discovery Services Limited.

MACS® is a registered trademark of Miltenyi Biotec B.V. & Co. KG.

LeucoSEP™ is a trademark of Greiner Bio-One GmbH.

SepMate™ is a trademark of STEMCELL Technologies.

Contact: info@pharmagene.com
pharmagene.com