

Monocyte Activation Test (MAT)

**Modern Pyrogen Testing
Sensitive. Reliable. Future-Proof.**

Why Pyrogen Testing Matters

Pyrogens are fever-inducing substances originating from bacteria, fungi, viruses, or environmental contaminants. When present in injectable pharmaceuticals, they pose a serious risk to patient safety.

Historically, pyrogen detection relied on the Rabbit Pyrogen Test (RPT) and the Bacterial Endotoxin Test (BET). Today, the **Monocyte Activation Test (MAT)** offers a cutting-edge, *in vitro* alternative that combines the strengths of both methods and goes beyond.

MAT at a Glance

- Quantitative, sensitive, and reproducible
- Detects both endotoxins (LPS) and non-endotoxin pyrogens (NEP)
- Sustainable and ethically sourced reagents

The MAT leverages the human innate immune response: test samples are incubated with immune cells (e.g., PBMCs or cell lines). If pyrogens are present, they trigger the release of proinflammatory cytokines (such as IL-6 or TNF- α), which are then quantified via ELISA.

Our MAT Services – Trusted, Compliant, Ready

The Eurofins BioPharma Product Testing network offers a robust MAT solution:

- Validated MAT kits aligned with the current Ph. Eur.
- Multiple cell types and readouts for flexible, tailored testing
- GMP-compliant execution in state-of-the-art laboratories
- Expert scientists with decades of combined experience



Regulatory Compliance – Act Now

Since 2010, MAT has been included in the European Pharmacopoeia (EP, Chapter 2.6.30). As of **July 1st, 2025**, the Rabbit Pyrogen Test (RPT) was replaced by MAT, in accordance with the 11th edition of the Ph. Eur. and the directive from the European Directorate for the Quality of Medicines & HealthCare (EDQM).

Product Overview

	Option 1	Option 2	Option 3
Manufacturer	MAT BioTech	Lonza	Fujifilm Wako Chemicals
Kit name	CTL-MAT Kit	PyroCell MAT Kit	LumiMAT Pyrogen Detection Kit
Cells used	PBMC	PBMC	Reporter gene cell line
Readout	Absorbance via IL-6 ELISA	Absorbance via IL-6 ELISA	Luminescence
LOD	0.02 EU / mL	0.02 EU / mL	0.03 EU / mL

Your Partner for a Seamless Transition to MAT

We're here to support your transition from RPT to MAT, on time and in full compliance. Our team will help you identify the most suitable MAT format for your specific product and regulatory needs.

Get in touch today – we're happy to advise you!

Comprehensive GMP Testing Services

Method Development & Validation • Release Testing • Raw Materials Testing
Cell Banking Services • Virology Services • Facility & Process Validation
Chemistry • Biochemistry • Molecular & Cell Biology • Microbiology
Stability Testing & Storage • Primary & Secondary Package Testing

Flexible Service Models

Fee For Service (FFS)
Full-Time-Equivalent (FTE)
PSS Outsourcing Solutions®

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