A New Validated Method for Quantifying Target Aromatic Compounds in Hydrocarbon Resins

GC–MS in SIM Mode · Sub-ppm Detection · Multi-Laboratory Validated

HARRPA is pleased to announce the availability of a **comprehensive, validated analytical method** for the determination of target aromatic monomers and related compounds in hydrocarbon resin tackifiers. The method — based on gas chromatography coupled with mass spectrometry (GC–MS) operated in Single Ion Monitoring (SIM) mode — provides sensitive, selective, and reproducible quantification of key aromatic constituents at sub-ppm levels.

Compounds covered include: benzene, toluene, ethylbenzene, xylenes (o-, m-, p-), styrene, α-methylstyrene, indene, methylstyrenes, methylindenes, dicyclopentadiene, and naphthalene.

Detection capability: reliably from ~0.3 ppm, with quantification confidence up to 40 ppm per compound.

The procedure involves dissolving the resin in tetrahydrofuran, precipitating the bulk polymer matrix with methanol, and analysing the clear supernatant by GC–MS using an internal standard (1,2,4-trichlorobenzene) for accurate, compound-specific quantification via pre-determined response factors. The full documentation package includes a Standard Operating Procedure, an analytical workflow decision tree, a technician training guide, and method validation guidelines.

The method has been tested across four member laboratories (Exxon (ex-member), Arakawa, Synthomer and Rain Carbon), demonstrating its robustness and suitability for quality control, regulatory submissions, and safety assessments relating to hydrocarbon resin tackifiers.

Availability. The full method documentation is available to interested parties upon request. Please contact the HARRPA Secretariat at www.harrpa.eu to obtain a copy.

Commitment to ongoing rigour

HARRPA is committed to the continued scientific rigour of this method. A formal inter-laboratory round robin exercise will be conducted every two years to monitor and reassess method performance, ensuring the procedure remains fit for purpose as analytical technologies and regulatory requirements evolve.

HARRPA
Rue Belliard 40 b.15 B-1040 Brussels Belgium
jwi@cefic.be www.harrpa.eu

A sector group of Cefic
European Chemical Industry Council - Cefic aisbl
EU Transparency Register n° 64879142323-90