NQAC
Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Butadiene and Styrene in Packaging by Static HS-GC-MS

Method Number: LI-00.063

Scope of Application: Polystyrene (PS), styrene-butadiene block copolymer (SBS), or acrylonitrile-butadiene-styrene polymer (ABS) packaging materials.

Description: This is an in-house validated screening method for the quantitative analysis of 1,3-butadiene, cyclohexane and styrene monomer in polystyrene (PS), styrene-butadiene block copolymer (SBS), or acrylonitrile-butadiene-styrene polymer (ABS) packaging materials. Cyclohexane is not part of the polymer, but is a solvent used to disperse 1,3-butadiene during polymerization for SBS and ABS production. In the original LI it was difficult to detect 1,3-butadiene so cyclohexane was included in this method as a marker compound for 1,3-butadiene presence.

Sample Weight Required: Minimum of a stack of 12 original containers. In the case of samples which do not clearly fall into a container category – 20 g of sample.

Method Reference: *Primary*: LI-00.063 - "Butadiene and Styrene in Packaging by Static HS-GC-MS", Nestec LTD, April 2008
Others: GI-31.008-1 - "Nestlé Policy on Packaging Materials in Contact with Food"
GI-80.104 - "Guide for the Surveillance of Packaging and Auxiliary Materials"
LI-00.063-VF - "Method validation for Butadiene and Styrene in Packaging"

Analytical Platform: Static HS-GC-MS

Special Information: Each packaging analysis selected must have separate original packaging wrapped in multiple layers of foil to prevent contamination and loss of volatiles. If not possible, please contact Customer Service for options.

Analyte Reported	Unit of Measure	Limit of Quantification	Reproducibility
1,3-Butadiene	mg/kg	0.4	20%
Styrene	mg/kg	50	20%
Cyclohexane	mg/kg	40	20%