

DIN ISO 18447:2023-01 (E)

Tea - Determination of theaflavins in black tea - Method using high performance liquid chromatography (ISO 18447:2021)

Contents

	Page
National foreword.....	3
National Annex NA (informative) Bibliography.....	4
Foreword.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Principle.....	6
5 Reagents.....	6
5.1 General.....	6
5.2 HPLC mobile phases.....	7
5.3 Stock standard solutions.....	7
5.3.1 General.....	7
5.3.2 Preparation of individual theaflavin stock standard solutions.....	8
5.4 Mixed standard solutions.....	8
5.5 Caffeine standard — Preparation of caffeine stock solution, corresponding to 2,00 mg/ml.....	8
6 Apparatus.....	9
7 Sampling.....	10
8 Preparation of test samples.....	10
9 Procedure.....	10
9.1 General.....	10
9.2 Determination of dry matter content.....	10
9.3 Test portion.....	11
9.3.1 Instant tea.....	11
9.3.2 Leaf tea	11
9.4 Extraction of theaflavins.....	11
9.4.1 Instant tea.....	11
9.4.2 Leaf tea	11
9.5 Dilution.....	11
9.6 Determination	12
9.6.1 General.....	12
9.6.2 Adjustment of the apparatus.....	12
9.6.3 HPLC analysis.....	12
9.6.4 Identification.....	12
10 Calculation.....	13
10.1 General.....	13
10.2 Quantitation using theaflavin standards.....	13
10.3 Quantitation using a caffeine standard and theaflavin RRFs.....	14
11 Precision	15
11.1 Interlaboratory test.....	15
11.2 Repeatability.....	15
11.3 Reproducibility.....	15
12 Test report.....	15
Annex A (informative) Results of interlaboratory tests.....	17
Annex B (informative) Assessment of the purity of standards used in the RRF work.....	18
Annex C (informative) Typical HPLC chromatograms	19
Bibliography.....	24