

DIN CEN/TS 17303:2019-06 (E)

Foodstuffs - DNA barcoding of fish and fish products using defined mitochondrial cytochrome b and cytochrome c oxidase I gene segments

Contents		Page
European foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Principle	7
5	Reagents and materials	7
5.1	General	7
5.2	PCR reagents	8
6	Apparatus	9
7	Procedure	9
7.1	Sample preparation	9
7.2	DNA extraction	9
7.3	PCR	9
7.3.1	General	9
7.3.2	PCR setup	10
7.3.3	Temperature-time program	11
7.3.4	PCR controls	11
8	Evaluation	12
8.1	Evaluation of PCR products	12
8.2	Evaluation of the PCR results	12
8.3	Sequencing of PCR products	12
8.4	Evaluation of sequence data	13
8.5	Comparison of the sequence with public databases	13
8.5.1	General	13
8.5.2	Sequence comparison of cytb and/or cox1 DNA sequences with GenBank	13
8.5.3	Sequence comparison of cox1 DNA sequences with BOLD	14
9	Interpretation of database query results	15
10	Validation status and performance criteria	15
10.1	Collaborative study for the identification of fish species based on cytb sequence analysis	15
10.2	Collaborative study for the identification of fish species based on cox1 sequence analysis	16
11	Test report	18
Annex A (informative) Practical laboratory experiences with the amplificability of cytb or cox1 segments from tested fish species		19
Bibliography		24