

# DIN SPEC 10133:2014-09 (E)

## Toxicological assessment of additives for tobacco products - A guidance

---

Contents	Page
Foreword .....	3
1 Background and objective of this document .....	4
2 Overview of current legal requirements, agreements and proposals .....	5
3 Discussion of approaches to the toxicological examination and evaluation of additives to tobacco products .....	9
3.1 Purpose .....	9
3.2 Basic considerations .....	9
3.2.1 General .....	9
3.2.2 Test matrix .....	10
3.2.3 Smoke generation .....	11
3.2.4 Substrates .....	11
3.2.5 Reference parameters for test doses .....	13
3.2.6 Scope of testing .....	13
3.2.7 In vivo versus in vitro testing .....	14
3.2.8 Positive controls .....	14
3.2.9 Discriminatory power of test systems .....	14
3.3 Toxicological data for the unburnt additive .....	15
3.4 Toxicological testing of the additive after combustion .....	15
3.4.1 Chemical analytical processes .....	15
3.4.2 Biological test systems .....	17
3.5 Interpretation and evaluation of toxicological data .....	24
4 Conclusions and recommendations .....	25
4.1 General .....	25
4.2 Toxicological data for the additive as a neat single substance .....	25
4.3 Pyrolysis of the additive as a neat single substance .....	25
4.4 Chemical and toxicological effects of additives on cigarette mainstream smoke .....	25
4.5 Assessment of test results .....	27
Annex A (informative) Examples of databases supplying authorized and peer-reviewed toxicological data .....	31
Bibliography .....	34