

Exposure Assessment - (E171)

Executive Summary

In this guide

[In this guide](#)

1. [Introduction - \(E171\) Executive Summary](#)
2. [Characterisation and ADME considerations](#)
3. [Review of toxicity for the endpoints identified by the COT](#)
4. [Establishment of a Health-Based Guidance Value \(HBGV\)](#)
5. [Exposure Assessment - \(E171\) Executive Summary](#)
6. [Risk Characterisation - \(E171\) Executive Summary](#)
7. [COT Overall Conclusion and References](#)

31. Titanium dioxide (E171) can be found in a number of food categories, as well as in cosmetics and medicines. The exposures calculated and considered in this assessment are only for food and were for infants, toddlers, children, adolescents, adults, and the elderly using food consumption data from UK surveys. Maximum occurrence levels of titanium dioxide for specific food items, reported by EFSA (2021), were also used in the estimation of exposure.

32. The mean calculated total dietary exposures for TiO₂ ranged from 3.3 to 11 mg/kg bw per day. The 95th percentile total dietary exposures for TiO₂ ranged from 9.1 to 26 mg/kg bw per day. The 3 food groups that contribute the most to these exposures are: protein products; decorations, coatings and fillings; and sauces.

33. The exposure assessment took into account use levels in only sixteen food groups whereas E171 is approved in more categories (forty-eight). This may introduce underestimations for exposures. However, not all foods within the categories assessed will contain E171, which means exposure in those categories may be overestimated. In addition, the assessments are based on the assumption that all food in all categories assessed contain E171 at the maximum reported

levels. This is unlikely and overall exposure is therefore more likely to be overestimated.