



Titanium dioxide in medicinal products

Extraordinary Pharmaceutical Committee, 17/9/2021

OUTLINE

- **Legal context and implications**
- **Main elements of the draft Regulation**
- **Next steps**

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Legal context & implications (1)

- **Food additives and medicinal products: a legal link**
 - Directive 2009/35/EC: use of colours in human and veterinary medicinal products **IF** authorised in Regulation No 1333/2008 on food additives, subject to the compliance with the purity criteria
- **Consequence**: Decision to delete TiO₂ from the list of authorised food additives is of paramount importance for their use as a colouring matter in medicinal products

Legal context & implications (2)

- **Impact** of the removal of titanium dioxide from the list of authorised food additives **on medicinal products?**
- 17 May 2021: EC request to EMA
 - Technical purpose of titanium dioxide in medicinal products, scope and functions
 - Feasibility of alternatives to replace titanium dioxide & impact on quality, safety and efficacy of medicines;
 - Transition period for the phasing out of titanium dioxide in all or specific uses in medicines
- 8 September 2021: Final EMA analysis

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Main elements of the draft Regulation (1)

- **Ban** the use of titanium dioxide **in food**
- **Maintain** the use of titanium dioxide in **medicinal products, provisionally**
- Pressure on the pharmaceutical industry to develop alternatives
- Review clause of 3 years

→ **5 Recitals (14 to 18) and 1 article (Article 3)**

Main elements of the draft Regulation (2)

Recital 14

Directive 2009/35/EC of the European Parliament and of the Council restricts the use of **colours in human and veterinary medicinal products** to those authorised in accordance with Regulation (EC) **No 1333/2008 on food additives**, for which specifications are laid down in Commission Regulation (EU) No 231/2012. **Uses of excipients other than colours in medicinal products** are subject to the Union rules on medicinal products and are evaluated as part of the overall benefit risk profile of a medicinal product.

Main elements of the draft Regulation (3)

Recital 15 : Main conclusions of EMA analysis

- **Widely used** as excipient in **essential medicines** (oral solid and semi-solid dosage forms)
- Mainly used as a **colour and opacifier - multiple functions**
- **Alternatives possible** from a **technical point** of view; BUT **feasibility not confirmed** (impact on quality, safety and efficacy of medicinal products)
- **Difficult** at this stage to recommend a **precise transition period timeframe for replacement** of titanium dioxide
- **Global dimension** and impact on **availability**

Main elements of the draft Regulation (4)

Recital 16 : use in medicinal products remains possible provisionally

On the basis of the EMA scientific analysis, and in order to avoid shortages of medicinal products that could have impacts on public health, titanium dioxide (E 171) **should remain provisionally on the list of authorised additives** to allow its use in medicinal products as a colour, pending the **development of adequate alternatives** to replace it while **ensuring the quality, safety and efficacy** of the medicinal products concerned.

Main elements of the draft Regulation (5)

Recital 17 : obligations on the pharmaceutical industry

It is of critical importance that the pharmaceutical industry **makes any possible efforts to accelerate the research and development of alternatives** that would be used as a replacement for titanium dioxide (E 171) in medicinal products, and to **submit the necessary variation** to the terms of the marketing authorisations concerned.

In the absence of such efforts, competent authorities may request the concerned stakeholders to submit **objective and verifiable reason explaining the non-feasibility** of the replacement.

Main elements of the draft Regulation (6)

Recital 18 and Article 3 – Review clause of 3 years

- Commission **committed to review** the necessity to **maintain titanium dioxide (E 171) or otherwise delete** it from the Union list of food additives for exclusive use as a colour in medicinal products within **three years after the date of entering into force** of this Regulation.
- **Updated EMA assessment by 1st April 2024** – Progress made to develop alternatives in new and already authorised products, impact on quality, safety, efficacy & availability

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Next steps

- 14/09: Working Group on Food Additives
- 17/09: Pharmaceutical Committee
- 28/09: Standing Committee
- European Parliament and Council Scrutiny: 2 months
- COM adoption procedure
- January 2022: Adoption and publication