

## OBJECTIVE

Vitamin deficiencies    Vitamin-responsive epilepsies    Ketogenic diet

**Biotin supplementation:**  
Capsule formulations poorly adapted for pediatric use

**To assess the feasibility and palatability of an oral biotin formulation better suited for pediatric use**

## MATERIALS & METHODS

**Literature review** to identify existing oral biotin formulations



**Analysis of consumption patterns and dosages** prepared during 2025: selection of the most appropriate concentration based on an analysis of all formulations



**Palatability study:** 3 solutions tested blindly by volunteers

**Rating of each solution on a 0–5 scale:**

- Odor
- Bitterness
- Sweetness
- Taste acceptability
- Overall appreciation



**Bitterness control:**  
pyridoxine 50 mg/mL in Inorpha® (A)



**Sweetness control:** Inorpha® (B)



**Biotin preparation (C)**



**Biotin preparation (D):**  
visual appearance and resuspension

## RESULTS

**3 formulations** identified in the literature: only the Inorpha® formulation meets the requirements of a ketogenic diet

**10 mg/mL concentration** allowing treatment of all patients with an acceptable volume

**Palatability test results in 35 volunteers:**

| Criteria                    | Results                                                                                                      |
|-----------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Odor</b>                 | 3,03 ± 1,27 /5 for (C)                                                                                       |
| <b>Bitterness</b>           | Detected by 19 participants and appreciated by 14 of them for formulation (C)                                |
| <b>Sweetness</b>            | 4 volunteers did not detect the sweetness of (B)                                                             |
| <b>Taste acceptability</b>  | Taste was considered acceptable by 80% of the volunteers and by 78% of those who completed tests (A) and (B) |
| <b>Resuspension</b>         | 4,35 ± 0,73 /5 for (C)                                                                                       |
| <b>Visual appearance</b>    | 3,00 ± 1,4 /5 for (C)                                                                                        |
| <b>Overall appreciation</b> | 3,2 ± 0,97 /5 for (C)                                                                                        |

## CONCLUSION



Inorpha®: development of an **easy-to-use suspension** with an acceptable taste



Biotin 10 mg/mL suspension **made available to pediatric departments** to assess palatability



Validation of an **HPLC assay method** described in the literature: transition to a **hospital pharmacy preparation** ?