

# Digestive tolerance of different doses of NUTRIOSE®FB in healthy men

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## INTRODUCTION

NUTRIOSE®FB is a dextrin obtained from wheat starch. In contrast to GLUCIDEX® 6, which is a standard maltodextrin, NUTRIOSE®FB is not completely hydrolysed and absorbed in the small intestine, due to many  $\alpha$  1-6 linkages and the presence of non-digestible glucosidic linkages ( e.g.  $\alpha$  1-2 and  $\alpha$  1-3). Compared with other low digestible carbohydrates, NUTRIOSE®FB may show a better tolerance as it is partly digested and absorbed in the small intestine and is slightly excreted in the faeces.

The aim of the study was to assess the digestive tolerance of NUTRIOSE®FB either administered during a short or a long period of time.

## MATERIALS AND METHODS

### Short-term study

- 20 subjects, age 20 to 44 years, BMI 20.1 - 29.5 kg/m<sup>2</sup>.
- Randomized, double blind, placebo controlled, cross over study.
- Treatments (NUTRIOSE®FB or GLUCIDEX® 6, the placebo) differed in gradual build-up of 10, 30 and 60, or 15, 45 and 80 g/day, each dose consumed for 7 days.
- Subjective evaluation of gastrointestinal complaints by daily questionnaires.

### Long-term study

- 43 subjects, age 20 to 45 years, BMI 20.0 - 31.0 kg/m<sup>2</sup>.
- Randomized, double blind, placebo controlled, 3 parallel treatments study.
- Treatments (NUTRIOSE®FB, 30 or 45 g/day and GLUCIDEX® 6, the placebo at 22.5 g/day) were given for 28 days.
- Subjective evaluation of gastrointestinal complaints by daily questionnaires.

### Subjects

### Design

## RESULTS AND DISCUSSION

### Short-term study

Compared with placebo, flatulence occurred more frequently over the last six days on 30, 45, 60 or 80 g/d of NUTRIOSE®FB. During the last 24 h, i.e. the 6<sup>th</sup> to 7<sup>th</sup> day of 60 and 80 g/d of NUTRIOSE®FB, the frequency of flatulence was still higher. During the last 24 h on a daily dose of 60 g NUTRIOSE®FB, the frequency of defecation was decreased compared with GLUCIDEX® 6. Bloating occurred more often during the last 24 h on a treatment with 80 g/d of NUTRIOSE®FB.

**None of the doses of NUTRIOSE®FB resulted in diarrhoea in the short-term study.**

### Long-term study

No serious adverse events occurred. The complaint 'rumbling of the stomach' disappeared over time.

NUTRIOSE®FB was well tolerated in the long term at 30 - 45 g daily.

**No diarrhoea was reported.**

## CONCLUSION

NUTRIOSE®FB which is a soluble dietary fibre is well tolerated when administered for one week as well as for a four-week period. At 45 g/d no negative effect on gastrointestinal parameters was recorded. Higher daily dosages (60 and 80g/d) may result in flatulence and bloating that do not disappear with a 7 days adaptation period. No diarrhoea was recorded in both studies at a level as high as 80 g/d.

In conclusion: **NUTRIOSE®FB is a very well tolerated soluble dietary fibre.**