
Nutritional benefits of sourdoughs: LESAFFRE scientific position

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Scientific literature on nutritional benefits of sourdough breads includes numerous studies on micronutrient (vitamin and mineral) bio-accessibility, glycemia, bioactive peptides or impact on gut microbiota. Sourdough fermentation is increasingly considered among the public as a process yielding nutritional benefits, while reliable and relevant scientific evidence is still unclear or missing. Herein we propose to explore this issue and enlighten what is beneficial for consumers and what remains to be investigated.

We did a systematic review of literature to identify bread nutritional properties and related breadmaking processes: 239 articles were retrieved and investigated. Among these articles, nutritional properties specific to sourdough breads were identified and analyzed from 29 clinical, 8 preclinical and 95 in vitro studies.

Our investigation revealed that the combination of wholegrain flours with sourdough fermentation in specific conditions could have a beneficial effect on mineral bio-accessibility, glycemic response, satiety and gut health (gluten and FODMAP reduction, fiber content). However, many factors influence bread properties such as sourdough microbial composition, fermentation parameters, cereal as well as flour types. Processes and recipes variability did not allow us to draw clear conclusions on the isolated effect of sourdough fermentation.

In summary, our literature review showed that bread made from wholegrain flour combined with sourdough fermentation can provide nutritional benefits but more studies (In vitro, In vivo) with standardized approaches are required to investigate the benefits of sourdough fermentation in other conditions.