

## THE *IN VITRO* EFFICACY OF AN ANTI-MYCOTOXINS AGENT AGAINST ERGOT ALKALOIDS AND OTHER MYCOTOXINS

Riahi I.<sup>1</sup>, Sadurní, M.<sup>1</sup>, Trabalón, L.<sup>1</sup>, Martí, M.P.<sup>2</sup>, Sabaté, M.<sup>2</sup>, Puig, P.<sup>2</sup>, Escrivá, L.<sup>3</sup>, Meca, G.<sup>3</sup>

<sup>1</sup> Technical Department, BIÕNTE Nutrition S.L. Reus (Spain); <sup>2</sup> APSA R&D, Andrés Pintaluba S.A. Reus (Spain); <sup>3</sup> Laboratory of Agrifood Biotechnology, Department of Preventive Medicine, Nutrition and Food Science Area, Faculty of Pharmacy, University of Valencia, Valencia (Spain); insaf.riahi@bionte.com

### INTRODUCTION

The contamination of crops with mycotoxins is a major worldwide challenge in livestock production. **Ergot alkaloids** are mycotoxins mainly produced by fungal *Claviceps* species that usually affect cereals and can cause adverse health effects in animals, standing out their neurotoxic effects.

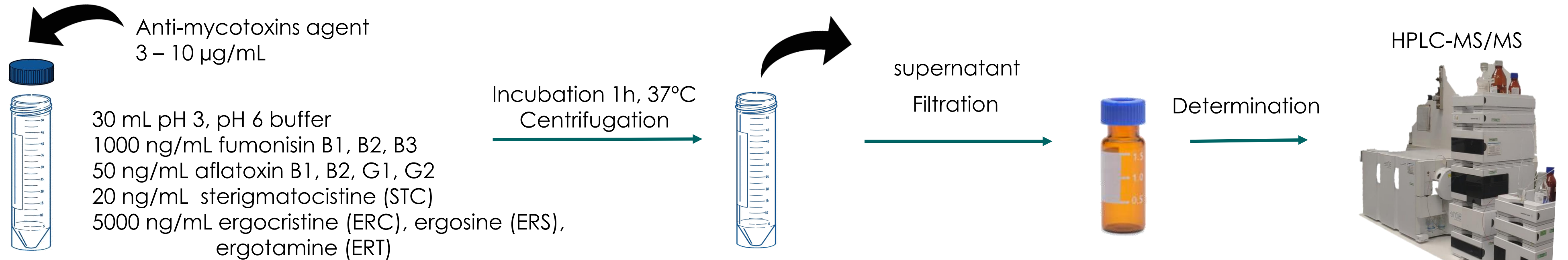
**Fumonisin and aflatoxins** are generated by other mycotoxin-producing fungi, contaminating cereals. **Sterigmatocystin (STC)** is a precursor for the synthesis of aflatoxin B1 and has been associated with several toxic effects, such as hepatotoxicity, nephrotoxicity and pulmonary injuries.

### OBJECTIVE

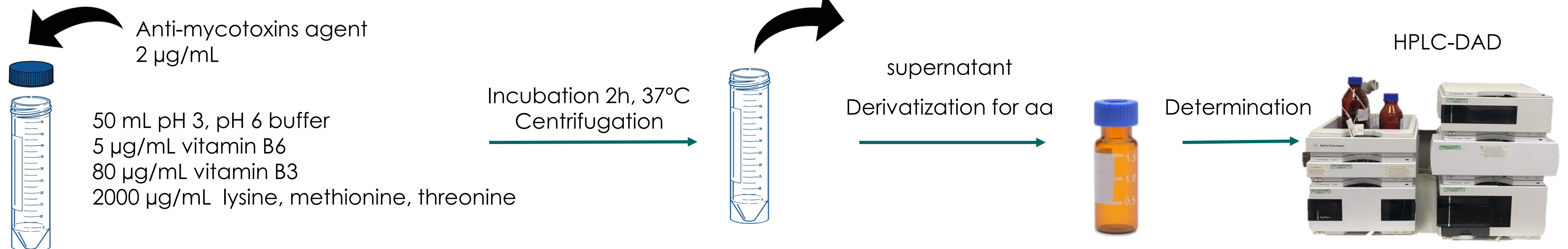
The aim of this study was to evaluate the *in vitro* efficacy and the selectivity (no adsorption of vitamins or amino acids) of an anti-mycotoxins agent based on selected binding material combined with natural extracts and yeasts.

### MATERIALS AND METHODS

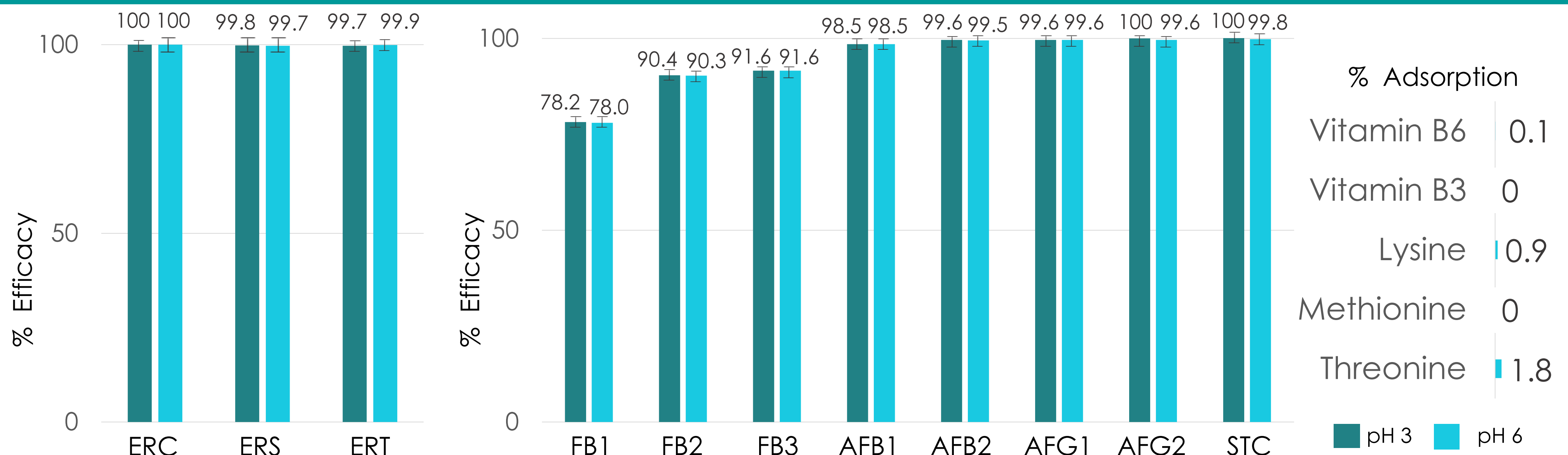
#### *In vitro* efficacy trial – Alkaloid ergots and Mycotoxins



#### *In vitro* efficacy trial – Vitamins and amino acids



### RESULTS



### CONCLUSIONS

The **anti-mycotoxins agent** tested in this study is **selective** and has a **high efficacy** to mitigate the **ergot alkaloids, fumonisins, aflatoxins and STC**, being a promising strategy to reduce the negative impact of mycotoxins.