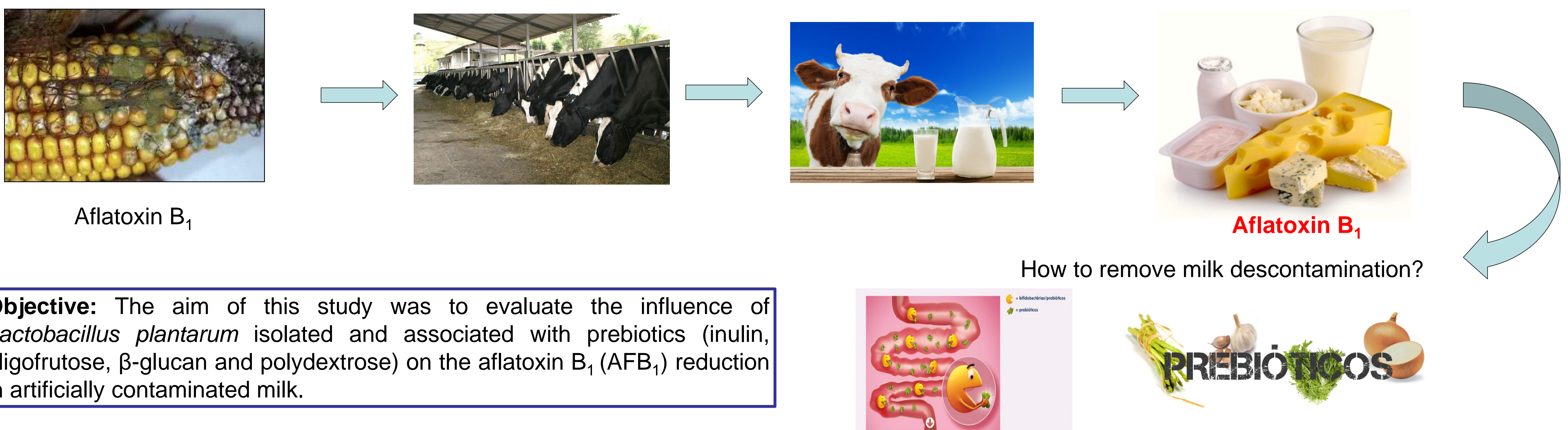
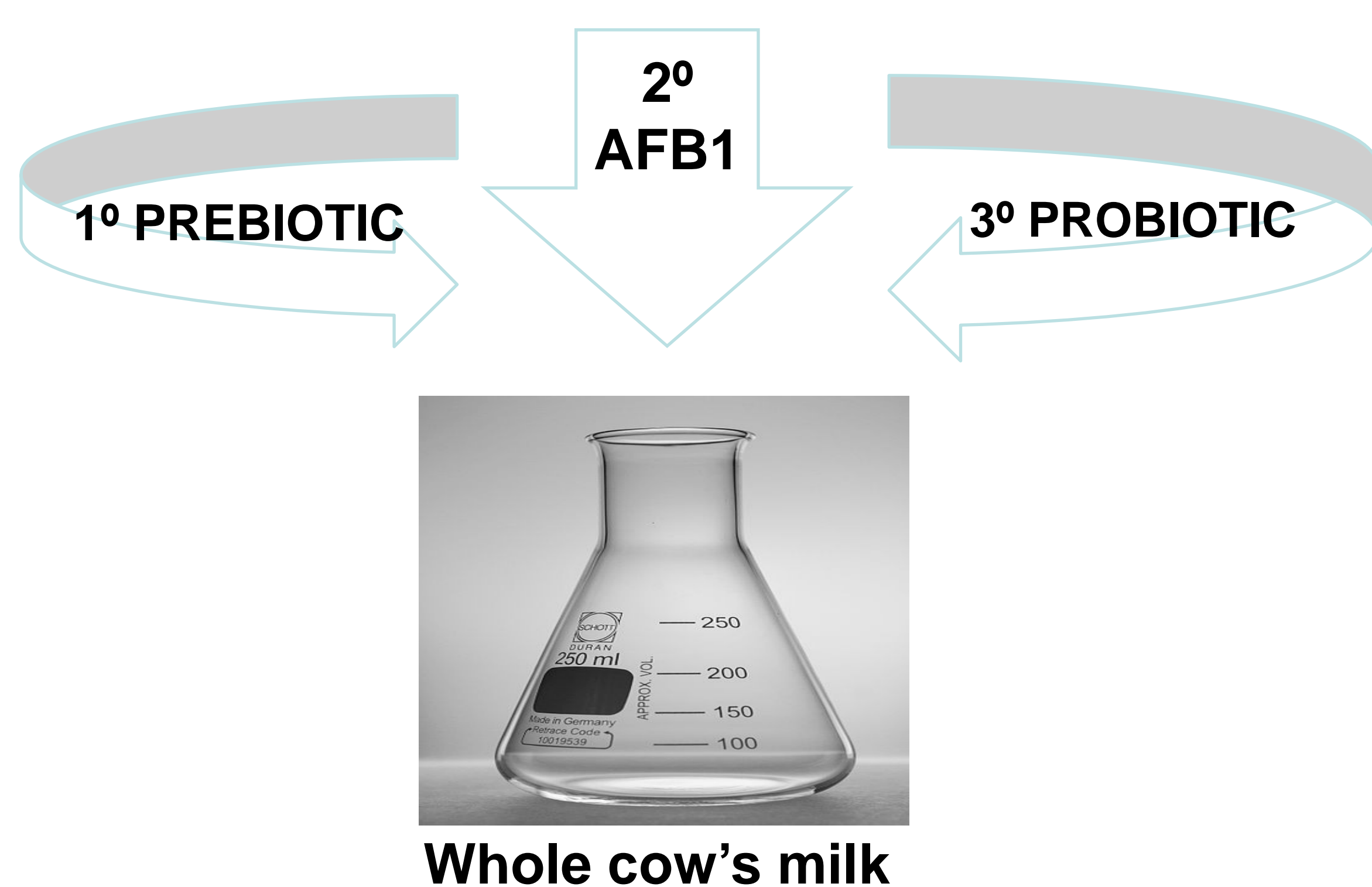


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INTRODUCTION



MATERIAL AND METHODS



- ❑ AFB₁ concentration, time of incubation (37°C) and prebiotic's concentration: Table 1.
- ❑ Concentration of *Lactobacillus plantarum*: 10⁸ UFC/mL (all trials).
- ❑ CT1 = positive control – milk + AFB₁, CT2 = milk + probiotic; CT3 = milk
- ❑ Quantification of AFB₁: UHPLC-FLD (Dionex Corporation, UltiMate 3000, Sunnyvale, Estados Unidos).

$$\% \text{ Reduction} = \frac{\text{Expected concentration } (\mu\text{g}) - \text{Real concentration } (\mu\text{g})}{\text{Real concentration } (\mu\text{g})} \times 100$$

RESULTS AND CONCLUSIONS

Table 1 – Fourteen-trial Plackett & Burman design matrix for independent variables AFB₁ concentration, time, inulin, oligofrutose, beta-glucan and polidextrose and dependen variable percentual reduction of AFB₁ in whole cow's milk.

Trial	Concentration of AFB ₁ (μg.L ⁻¹)	Time (h)	Inulin (%)	Oligofrutose (%)	Beta-glucan (%)	Polidextrose(%)	Reduction (%)
1	+1 (10)	-1 (0)	+ 1 (0,75)	- 1 (0)	- 1 (0)	- 1 (0)	7,57 ± 1,56
2	+1 (10)	+1 (6)	-1 (0)	+ 1 (0,75)	- 1 (0)	- 1 (0)	22,98 ± 0,60
3	-1 (5)	+1 (6)	+ 1 (0,75)	- 1 (0)	+ 1 (0,75)	- 1 (0)	< LOQ
4	+1 (10)	-1 (0)	+ 1 (0,75)	+ 1 (0,75)	- 1 (0)	+ 1 (0,75)	< LOQ
5	+1 (10)	+1 (6)	-1 (0)	+ 1 (0,75)	+ 1 (0,75)	- 1 (0)	0,02 ± 2,52
6	+1 (10)	+1 (6)	+ 1 (0,75)	- 1 (0)	+ 1 (0,75)	+ 1 (0,75)	30,18 ± 1,97
7	-1 (5)	+1 (6)	+ 1 (0,75)	+ 1 (0,75)	- 1 (0)	+ 1 (0,75)	< LOQ
8	-1 (5)	-1 (0)	+ 1 (0,75)	+ 1 (0,75)	+ 1 (0,75)	- 1 (0)	55,85 ± 0,66
9	-1(5)	-1 (0)	-1 (0)	+ 1 (0,75)	+ 1 (0,75)	+ 1 (0,75)	5,48 ± 0,41
10	+1 (10)	-1 (0)	-1 (0)	+ 1 (0)	+ 1 (0,75)	+ 1 (0,75)	25,43 ± 3,42
11	-1 (5)	+1 (6)	-1 (0)	- 1 (0)	- 1 (0)	+ 1 (0,75)	< LOQ
12	-1 (5)	-1 (0)	-1 (0)	- 1 (0)	- 1 (0)	- 1 (0)	31,45 ± 2,94
13	0 (7,5)	0 (3)	0 (0,38)	0 (0,38)	0 (0,38)	0 (0,38)	25,64 ± 1,54
14	0 (7,5)	0 (3)	0 (0,38)	0 (0,38)	0 (0,38)	0 (0,38)	21,71 ± 2,57
CT ₁	(7,5)	(3)	(0)	(0)	(0)	(0)	-
CT ₂	(0)	(3)	(0)	(0)	(0)	(0)	ND
CT ₃	(0)	(3)	(0)	(0)	(0)	(0)	-

Lactobacillus plantarum isolate or in combination with prebiotics has a potential to reduce aflatoxin B₁ concentrations in whole cow's milk.

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