CHARACTERIZATION OF *WEISELLA* SP. ISOLATED FROM CHILI PEPPER FERMENTATION.

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Key words: Weisella, fermentation, chili pepper.

Introduction. Chili pepper is highly consumed in Mexico. The fermentation of this fruit increase free phenolics in the fruit such as *p*-coumaric and ferulic acid (1). In a previous review mentioned that the vegetable endogenous lactic acid bacteria may development mechanisms to survive such as the inducible enzymes in presence of phenolics (2). The aim of this work was to establish the tolerance from *Weisella* sp. previously isolated from chili pepper fermentation (*Capsicum annuum* L.) in presence of sodium chloride, *p*-coumaric and ferulic acid.

Methods. Fresh chili pepper was fermented in optimal conditions (1). Halotolerance was performed in MRS broth varying the concentration of sodium chloride from 0 to16% (w/v) (3). The growth in presence of phenolic acids (4mM) was evaluated by optical density (OD_{560}), the cells viability was carried out by spreading tenfold serial dilution in plates to determine the total CFU/mL for each condition.

Results. *Weisella* sp. diminished its growth when the concentration of sodium chloride is above 6%, however the viability of cells remains as shown in figure 1.

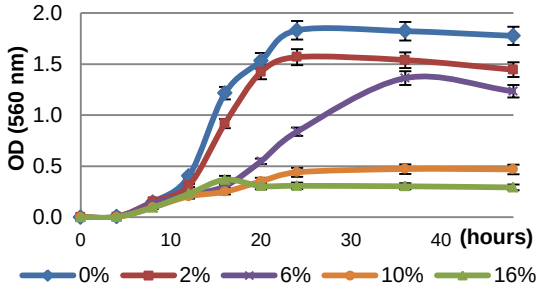

Figure 1. Growth of *Weisella* sp. in presence of different concentration of sodium chloride.

Weisella sp. reached 10 log CFU/mL in control medium. In presence of *p*-coumarate and ferulate, this strain could growth but it could not reach its maximum growth. This bacterium had an 8.9 log CFU/mL and 6.78 CFU/mL after 24 h of incubation, in presence of ferulate and *p*-coumarate respectively. Nevertheless, after 36 hours there was a significant growth decrease in both cases (figure 2).

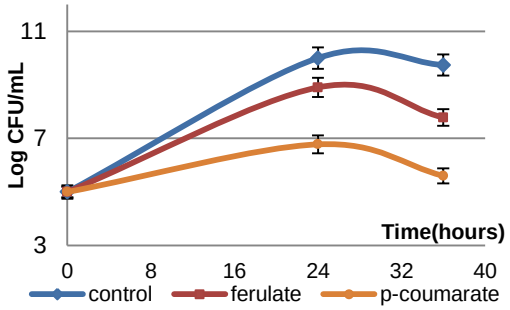

Figure 2. Growth of *Weisella* sp. in presence of *p*-coumarate and ferulate.

Conclusions. *Weisella* sp. Is able to growth in presence of sodium chloride until 6%, also exhibited more tolerance to ferulate than *p*-coumarate. This is important because *Weisella* sp. may survive better in systems where phenolics are present and some pathogens are inhibited (4).

Acknowledgements. The authors thank to project SIP 20130910 for the resources for this investigation.

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