KOHOUT, CORDULA K. [1], ,REBEKKA R. REINER [1], CHRISTOPHER SHELSWELL [1], FLORIAN EMERSTORFER [1*], JASON M. GRECH [2] and JOHN FORTE [3], [1]ARIC GmbH, Josef-Reither-Straße 21-23, 3430 Tulln, Austria, [2]BetaTec Hop Products Ltd, Stanford Park, Stanford Bridge, Worcestershire, WR6 6SG, England and [3]BetaTec Hop Products Inc. 5185 MacArthur Blvd. N. W., Washington, D.C. 20016. **Investigation of hop alpha acids for the use in the sugar factory.**

Microorganisms (MOs) can enter the process of sugar production through different ways and can lead to economically significant sugar losses and other problems. Hop acids, especially hop beta acids are already used in the sugar industry since 1994. Due to their similar antimicrobial activity, the upcoming question is if alpha acids can be used in the sugar industry as well. Therefore three different hop products based on alpha acids provided from BetaTec were tested to evaluate their effect on the microbiological flora in the extraction area. In the next step their effect on the sensory integrity of the white sugar and the concentration in the white sugar after laboratory crystallization were determined.

All three tested products show an effect against microorganisms in raw juice with a difference in the required active concentration and the length of effectiveness. The concentration of all three hop products in laboratory produced crystalline white sugar was lower than the sensory relevant concentration. This concentration could not be recognized significantly in a 10 % sugar solution.

These lab scale results give a promising forecast for the application of hop alpha acids in the beet sugar industry.