

## POSSIBILITIES OF IDENTIFICATION AND EVALUATION THROUGH IONIC EXCHANGE OF CERTAIN SUPERFICIALLY ACTIVE ADDITIVES IN FOOD PROCESSING

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### SUMMARY

### INTRODUCTION

The present paper aims at showing some results obtained from evaluating different mixtures of ionic and nonionic superficially active structures with the aid of ion exchangers (Vionit, Dowex), structures that are frequently used in food processing as cleaning agents or multipurpose additivation systems.

### MATERIAL AND METHODS

The method relies on retaining anionic derivatised polyoxyethylene (PEO) chains on anionic ion exchangers (Vionit CS3) ( $H^+$  form), respectively the cationic derivatized polyoxyethylene (PEO) chains on cationic ion exchangers (Vionit AT1) ( $OH^-$  form) and on the elution in the eluent flux of non-polar polyoxyethylene (PEO) chains.

### RESULTS AND DISCUSSIONS

The main results of the research can be summarized in the following observations:

- The nature of the ionic transfer layer influences the separation process in all of the evaluated superficially active structures.
- There are no major differences between the compounds considering their chemical nature.
- The concentration and temperature influence the separation time.
- The acid-base character of the ionic exchange compounds influences the transfer time, drastically altering the pH within the first 20 minutes of the process.
- The 30 minutes interval is sufficient in order to achieve an efficient and exhaustive separation of two anionic superficially active compounds.

### CONCLUSIONS

The presented method is efficient, reproducible, fast and can be the critical point of control in the analytic control flow of a certain food product.