Case Study
Distillation of ethyl alcohol from citrus oil

Customer: A local producer of citrus-based ingredients, USA
This BUCHI customer is a family-owned company which grew to become a leader in the citrus industry by pioneering solvent, chemical synthesis, and flavor/fragrance applications from citrus oils. Its mission is to help companies around the world develop solutions from the finest quality citrus components and other plant-based products by offering exceptional technical support, and customer service.

Application: Fractional distillation of ethyl alcohol from citrus oil
Their primary products are citrus oils and food flavorings from citrus by-products, specifically oranges. During processing, ethyl alcohol is produced as another by-product, which is normally discarded. This customer distills this by-product for food grade alcohol and markets it as a side product to the liquor industry, pharmaceutical and food industries.

Equipment: Rotavapor® R-250EX, Custom fractionating column
Because of the potential explosion hazard posed by ethyl alcohol, the explosion-proof EX version of the Rotavapor is used.

Benefit / Conclusion: Additional revenue from a waste stream
By using the R-250EX, this small enterprise has been able to generate substantial additional annual revenue from the sale of food-grade ethyl alcohol from a secondary by-product that otherwise would be discarded as waste.

“BUCHI partners with clients big and small to provide innovative solutions to their pressing business challenges.”