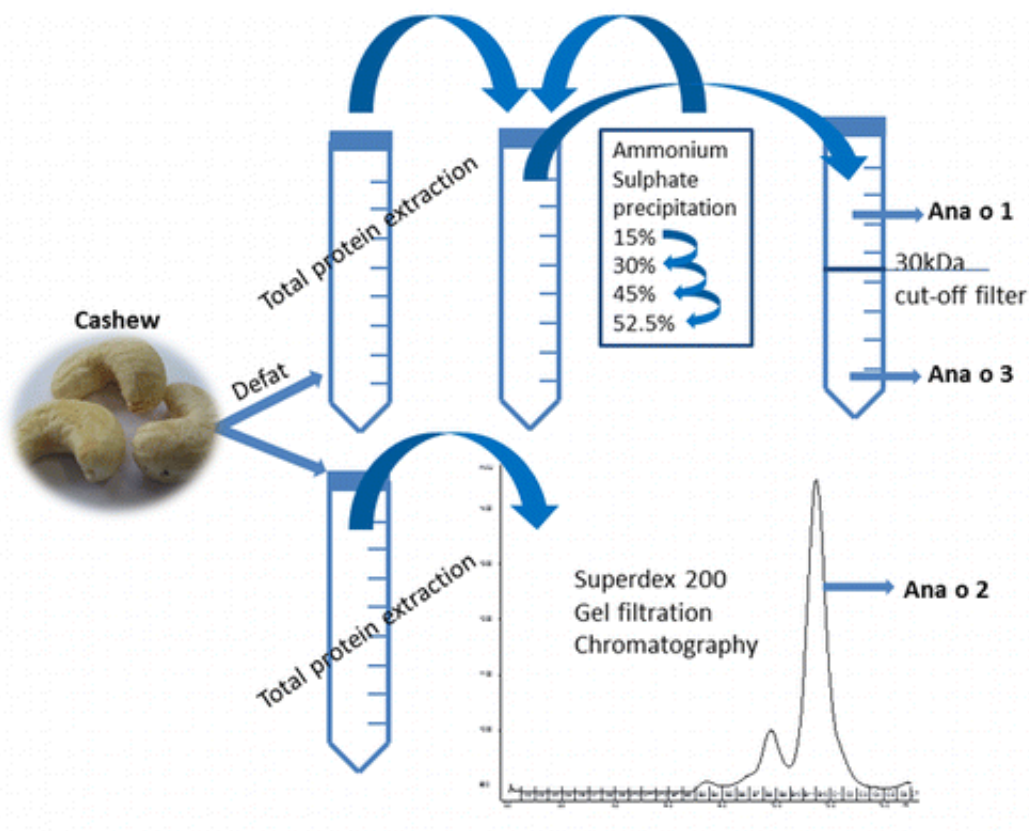


# Purified cashew proteins lend insight into allergic reactions

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It's well known that peanuts can cause severe reactions in people who are allergic, but research suggests that the risk of developing a life-threatening reaction could be higher for those allergic to cashews. Now scientists have come up with a fast and simple method to purify the three

main cashew allergens to help better grasp how they work and their effects on people. Their report appears in ACS' *Journal of Agricultural and Food Chemistry*.

Allergies to tree nuts and peanuts can cause mild symptoms, such as hives and itchy eyes. But some people who are allergic experience anaphylaxis, a life-threatening reaction that includes shortness of breath, swelling, dizziness and other symptoms. Scientists have identified three proteins associated with cashew allergies, but no one had isolated them with a high degree of purity or characterized them. Doing so, however, would help identify which specific allergen people react to, how the proteins might cross react with other [allergens](#) and potentially how to treat the allergy. Harry J. Wichers and colleagues decided tackle this challenge.

The researchers used three different methods—precipitation, ultrafiltration and gel filtration chromatography—to purify the three main cashew allergens. They then identified the proteins' subunits. Additionally, testing found a difference in how allergens bound to immunoglobulin E, an allergen-binding antibody, in Dutch children and American adults, shoring up previous suggestions that geography and age can play a role in allergies. Researchers say further studies can build on these results to analyze allergen structure, cashew varieties and the stability of proteins during processing.

**More information:** Marit Reitsma et al. Purification and Characterization of (Cashew) Allergens Ana o 1, Ana o 2, and Ana o 3 , *Journal of Agricultural and Food Chemistry* (2016). [DOI: 10.1021/acs.jafc.5b04401](https://doi.org/10.1021/acs.jafc.5b04401)

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