The results of all elements, with the exception of antimony, are below the corresponding detection limit. The detection limit results from the sample quantity (unfortunately high LOD because there is so little of the sample material); the intensity of the signal of the particular element in the ICP and overall contamination in the laboratory (double-distilled water; laboratory equipment; ICP). I had to set the detection limit for silicon at such a high level because I deal a lot with substances in my laboratory that contain silicon as a main component and there is therefore a risk of contamination. The vaccine vials and the laboratory equipment are also made of glass and can therefore deliver elevated Si values.

A signal is clearly detectable for antimony (Sb). To rule out interference from other elements, antimony was measured at three different wavelengths, all of which provide the same result. The blank value runs on baseline (indicating that contamination on my part is improbable).

I did several measurements of the solutions (also before and after the weekend) and found that the longer the digestion solutions stand, the smaller the antimony value. One can observe that with time the lipids contained in the vaccine form larger white flakes in the nitric acid solution. It is possible that the antimony is absorbed by these flakes and I consequently obtain lower and lower values as this process progresses.

It must be stated that the nitric acid digestion is far from ideal. A better solution would be one in which the lipids are also dissolved (possibly using a mixture of water and organic solvent). Unfortunately, I had no scope for this owing to the small amount of sample.

If the antimony value is significant from the point of view of the working group, further analyses would be necessary. My result is an indication that antimony could be present in the Moderna sample, as a clear signal can be identified at different antimony wavelengths.

To verify the result, further analyses would have to be carried out with unopened vials and further digestion procedures.