Using ultrasonic waves for cleaning edible bird nest

Edible bird nest is one of high economic value agricultural product in southern Thailand. Wild and farmed swallows are used to produce such a product. Nevertheless, both wild and farmed nests are subject to elaborate cleaning processes. Unfortunately, such processes require human labor. Typically, eight hours of tedious work are necessary to handpick feathers and dusts coagulated with the nest. In this work, we explore a possibility of using ultrasonic waves for cleaning the nest. A dual frequency—37 and 80 kHz—ultrasonic bath of 5.75 liter is employed. Stained nests are submerged in the water-filled ultrasonic bath and exposed to acoustic field. After designated periods, the cleaned nests are imaged with a digital camera without any post processes to the nest. The taken images are then analyzed using the brightness level of the photos in comparison to those taken before being acoustically radiated. As a result, we find that after acoustical exposure the nests are considered to be cleaner.

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