# INTO THE GROOVE

## Using environmentally friendly products to clean the surface of vinyl audio records

### Aims

The aim of this study was to identify a cleaning method to safely and effectively remove surface dirt from vinyl audio records using environmentally friendly products.

Sound archives and private collections around the world contain large numbers of vinyl records. Maintaining a clean surface is important for effective playback (image 1). Surface dirt, such as greasy fingerprints or dust can badly affect the sound quality. Cleaning needs to be as gentle as possible to minimise potential damage to the surface of the record.

Two environmentally friendly cleaning products were compared against water only. These were; Orvus WA (an animal shampoo, also used for textile cleaning) and Synperonic A7 (a detergent widely used by conservators).

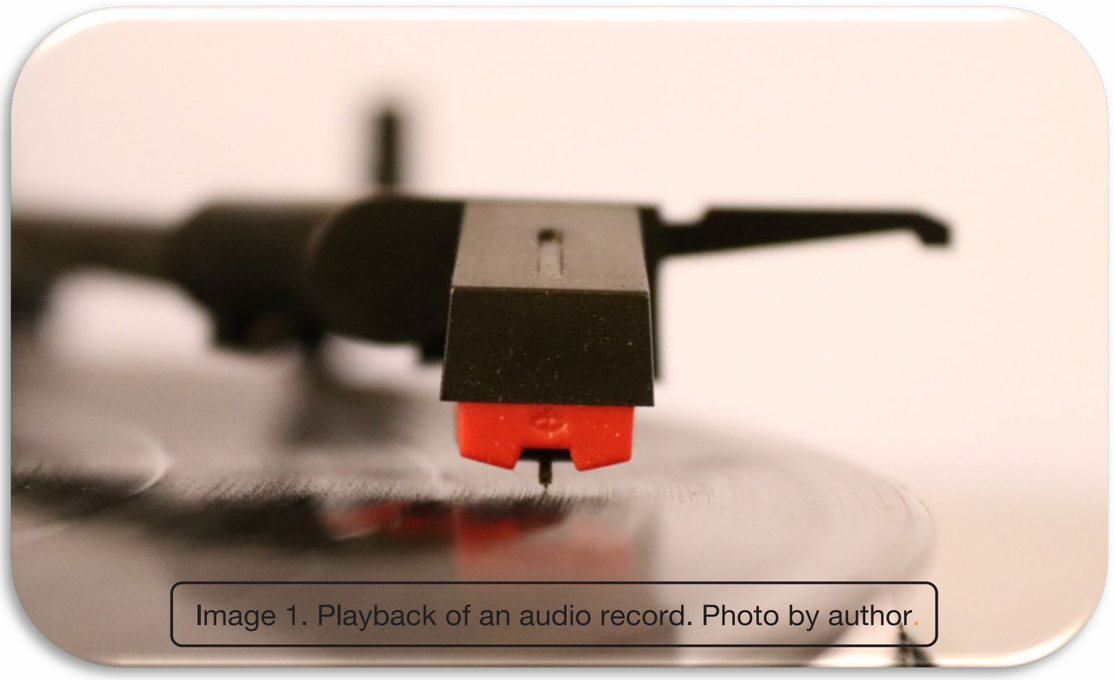


Image 1. Playback of an audio record. Photo by author.

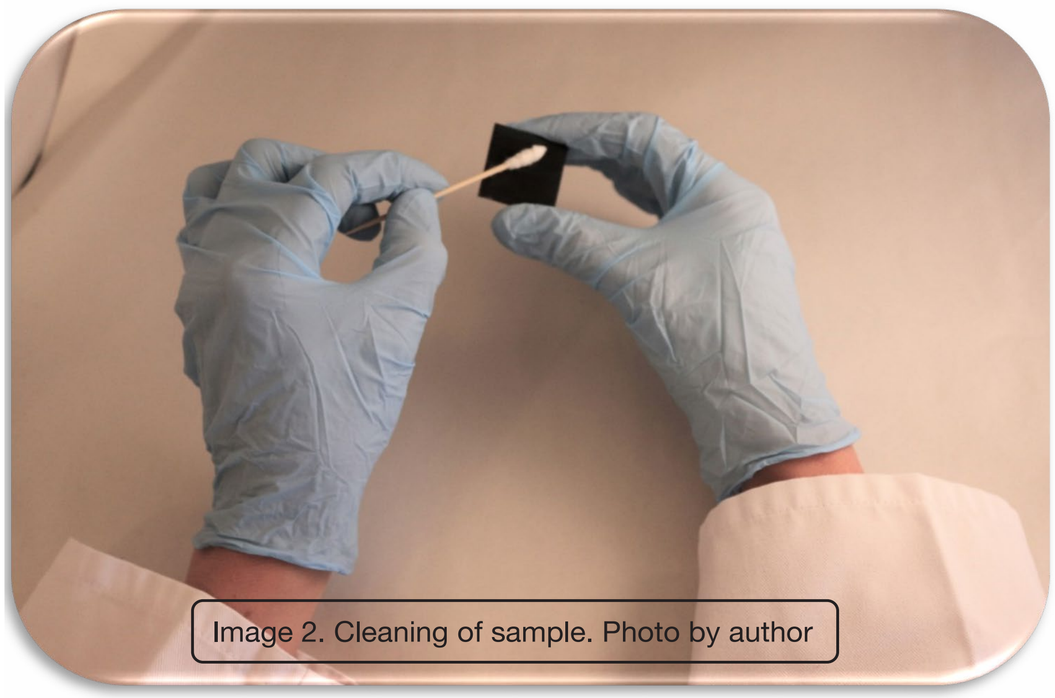


Image 2. Cleaning of sample. Photo by author

### Methodology

An LP record was cut into 3cm squares. Twenty-four samples were prepared with a greasy thumb print, to simulate poor handling. A further twenty-four samples were soaked in water with card from the record sleeve and compressed while drying. This simulated water damage and poor storage. Six samples were left unprepared as a control group.

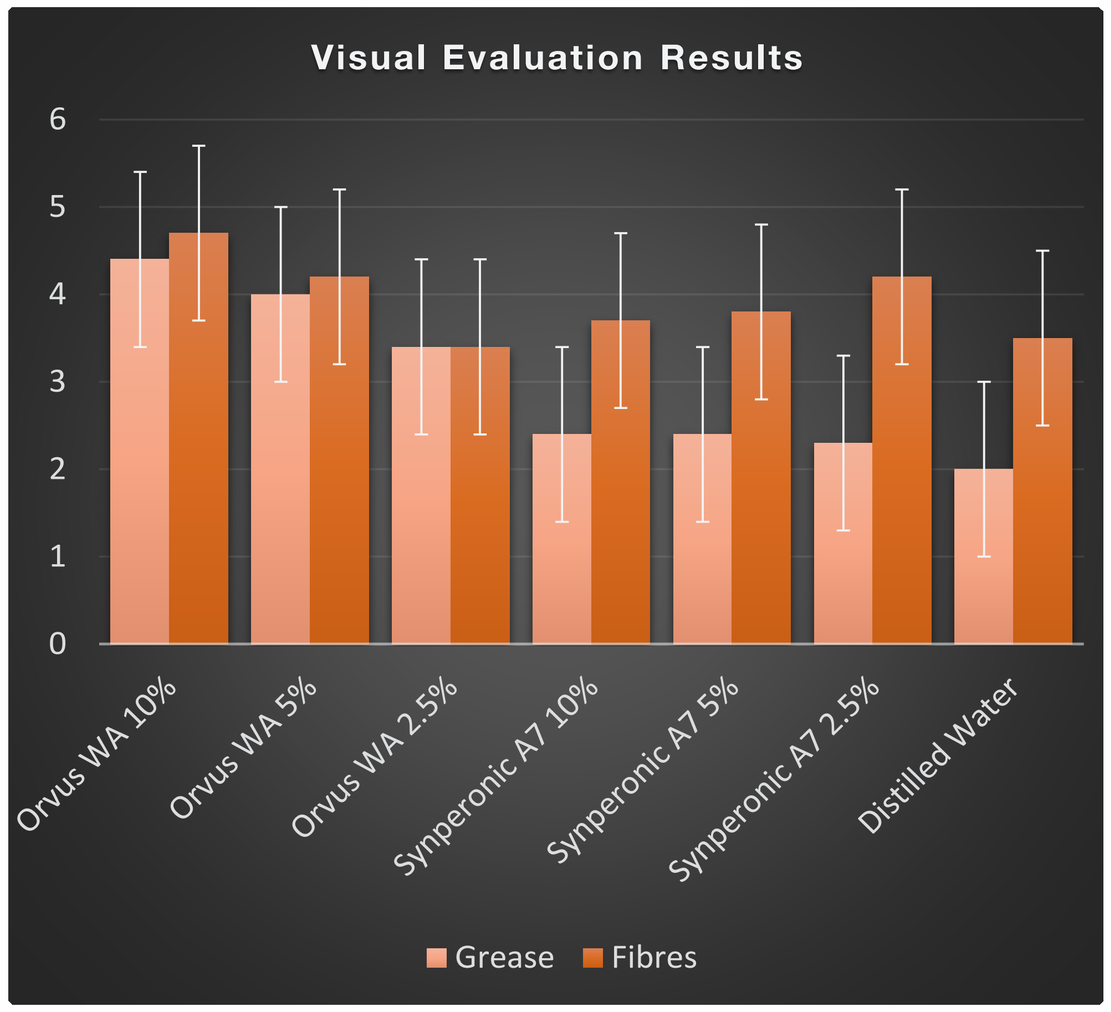
The samples were cleaned with different strengths of the products in solution with distilled water. A cotton swab soaked in the solution was used to gently sweep along the direction of the grooves (image 2). The samples were then cleaned with distilled water to remove any traces of the product.  Finally, the sample was dabbed dry with a paper towel and placed in a clean sealed bag, to prevent contamination. Three samples were used for each solution strength.

### Evaluation

The effectiveness of the cleaning was evaluated using the naked eye, a microscope at x20 magnification and a Dino-lite digital microscope at x240 magnification. The samples were graded using the following system:

1. No significant change
2. Large quantity of dirt still present
3. Obvious traces of dirt remain
4. Very little dirt remains
5. No dirt remains

The highest scoring sample from this evaluation was then tested against a control sample using FTIR analysis. This confirmed that the cleaning product had not altered the carbon structure of the plastic.




### Discussion

The results indicate that a solution of 10% Orvus WA paste in distilled water is the most effective product for removing grease and surface dirt from the surfaces of vinyl records. The FTIR analysis carried out confirms that this product and cleaning method does not cause chemical change in the plastic.

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