

Extended wash test



WRAP worked with COS, which is part of the H&M group, to run extended wash test trials on four different menswear Merino wool jumpers, in order to review and assess the optimal care instructions to maximise the garments' life.

- Extended wash tests provided COS with useful insights into the fabric performance of two Merino wool suppliers, across two colourways.
- The trial highlighted the high quality standard across COS menswear Merino range.
- Care label advice to consumers is critical to ensure garments' performance is maintained over washes.

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Case study

The objectives of this work were to:

- replicate consumer care activity by repeatedly washing and line-drying jumpers;
- understand how jumpers performed in a recommended gentle cycle at two different temperatures: 30°C and in cold wash (8-10°C);
- compare the performance of two different colourways within the same style; and
- compare the performance of two different suppliers.

The results of the testing would be used to help inform COS what information should be included on the jumpers' care labels and swing tags.

The extended wash test

Four different jumpers were tested: original grey; new grey; original navy; and new navy.

This allowed for comparison of two different suppliers for the supply of Merino wool (original and new) as well as two different colourways used in these menswear jumpers (grey and navy).

For each set of jumpers, individual samples were measured and control samples were selected for benchmarking. Flat relaxed measurements were recorded for chest width, waist width, body length, and sleeve length and width.

Five different wash cycles were undertaken in gentle cycle, at 30°C and in cold wash. After 1, 5, 10, 15, and 20 wash cycles, the samples were assessed for:

- dimensional stability to washing (via flat measurements);
- visual assessment of pilling;
- visual assessment for any colour variation; and
- overall general appearance.

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Results: Original navy and grey garments

- Most shrinkage occurred within the first two washes for both temperatures.
- The most noticeable area of shrinkage was on the waist. It is likely that this shrinkage would relax after wearing the washed jumpers.
- There was further shrinkage during subsequent washing, up to wash 20 for both temperatures. However, there was some variability within this for individual samples and no definitive pattern could be established.
- There was a marginal improvement in stability for both colours washed in the cold wash, compared to the 30°C washed samples.



Original grey after one wash.
Detail around neckline shows
slight cockling.

Results: New navy and grey garments

- There was more variability in how the shrinkage developed over repeated washes for the new jumpers, but no clear trend could be established for either colourway.
- The jumpers washed in cold wash initially performed better (in washes 1, 5, and 10): all showed less shrinkage on the chest measurements than the samples washed at 30°C. However, shrinkage performance alternated between cold and 30°C gentle in the following washes.
- The new navy samples showed very little overall difference in performance to washing for either temperature.
- The new grey samples indicated slightly better stability in cold wash based on the number of samples with a lower shrinkage, although the differences in shrinkage were often minimal.



Left: New Grey sample washed at 30°C gentle – after 20 washes



Right: Grey sample washed in cold wash gentle – after 20 washes.

Overall assessment

Pilling:

Overall there was little evidence of surface disruption on the washed garments when compared to the control garments, or when comparing garments washed at both temperatures, even after 20 wash cycles.

Cockling:

On some of the garments there was slight cockling, which is when the garment appears slightly ruffled and has a wave-like appearance. However, it is likely that this appearance would disappear once the garments were worn or ironed.

Colour:

There was very little variation in colour between all washed samples and the control garments.

Summary

The results from the extended wash test show that there is very little difference in sample performance across the original and new garments, and across both colourways. COS is delighted with the results of the trial as it highlighted the standard of high quality across the product range. The performance of the garments washed at 30°C gentle shows that the information on the care labels is correct. However, it is important to continue to engage with consumers to help them care for garments appropriately.

Next steps

COS intends to build on this work and develop continual improvement strategies. Some options include:

- Undertaking extended wearer trials on the specific samples washed; and
- Carrying out the trial on a specific product range to map performance of garments over time.

“We work hard to ensure that COS garments are designed and produced to last - our quality is an important part of that process. We like to think that we offer great quality at a comparatively affordable price, so it has been a joy to see how the jumpers have performed in this test. The results highlight that care label advice is critical to ensuring performance is sustained throughout the life of a garment.”

Nopor Stuart, Sustainability Manager, COS

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COS wrap

WRAP's vision is a world where resources are used sustainably. It works in partnership with governments, businesses, trade bodies, local authorities, communities and individuals looking for practical advice to improve resource efficiency that delivers both economic and environmental benefits.

This case study was developed as part of the [Sustainable Clothing Action Plan \(SCAP\)](#). This is part of a series of [industry trials](#) focussed on extending clothing life, based on improvement actions identified in the [Sustainable Clothing Guide](#). The guide highlights how interventions can be made in design and throughout the supply chain, to make clothing last longer.

Our mission is to accelerate the move to a sustainable resource-efficient economy through:

- **re-inventing** how we design, produce and sell products;
- **re-thinking** how we use and consume products; and
- **re-defining** what is possible through recycling and re-use.