Special Test
University of Kentucky Textile Lab

In 2012, CSCNetwork partnered with the University of Kentucky, UK School of Human Environmental Sciences, and Dr. Elizabeth Easter's Textile Testing Laboratory to test 100% Cotton and Microfiber bar mops. The laboratory provides services for the Association for Linen Management (ALM) as well as the textile, apparel, and appliances industries.

The test objectives were to determine:

1) The life span and durability of 100% cotton bar mops as compared to each supplier's product provided.

2) The life span, and durability of Microfiber bar mops as compared to each supplier's product provided.

The 100% Cotton bar mops were from five suppliers and the Microfiber bar mops were from four suppliers, which are all listed below.

<u>Suppliers Tested</u> – 100% Cotton Bar Mops:

American Dawn
Baltic
Calderon
Venus
Non Approved Supplier

<u>Suppliers Tested</u> – Microfiber Bar Mops:

American Dawn
Calderon
Golden Star
Venus

The specific tests on each bar mop determined quality, durability as well as adherence to specifications. All of the tests performed followed ASTM or AATCC standards.

Tests Performed:

ASTM D 5034-2009: Standard Method for Breaking Strength (Grab Test)
AATCC 96-2009: Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool (Dimensional Stability)
AATCC Test Method 130-2010: Soil Release: Oily Stain Release Method – Modified
AATCC Test Method 61-2012: Colorfastness to Laundering: Accelerated
ASTM D 4966-2012 Standard Test Method for Abrasion Resistance of Textiles Fabrics- Modified Abrasion

*For more details on the procedures please contact the CSCNetwork office.

Results:

ASTM D 5034-2009: Standard Method for Breaking Strength (Grab Test)

The following table depicts the average breaking strength by bar mop supplier after 25 IL for cotton and after 50IL for microfiber.

Suppliers	Average Breaking Strength after 25 IL/50 IL	
	Cotton (25 IL)	Microfiber (50IL)
American Dawn	Pass	Pass
Baltic	Pass	---
Calderon Textiles	Pass	Pass
Golden Star	---	Pass
Venus	Pass	Pass
Non-Approved Supplier	Pass	---

***Minimum of 40lbf for passing score

AATCC 96-2009: Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool (Dimensional Stability)

The table below depicts (as a percentage) the average dimensional change for the cotton bar mops after 25IL and the microfiber bar mops after 50IL.

Supplier	Dimensional Change (%) After 25 IL/50 IL	
	Cotton (25 IL)	Microfiber (50 IL)
American Dawn	Pass	Pass
Baltic	Pass	---
Calderon Textiles	Pass	Pass
Golden Star	---	Pass
Venus	Pass	Pass
Non-Approved Supplier	Pass	---

****Maximum of -10% for passing score

AATCC Test Method 130-2010: Soil Release: Oily Stain Release Method – Modified
The tables below report the scores given to each supplier after 25IL for the cotton bar mops and after 50IL for the microfiber bar mops. The bar mops were stained with ketchup, mustard, coffee, and bacon grease.

Cotton Bar Mop Suppliers (25 IL)	Ketchup	Mustard	Coffee	Bacon Grease
American Dawn	Pass	Fail	Pass	Pass
Baltic	Pass	Fail	Pass	Pass
Calderon Textiles	Pass	Fail	Pass	Pass
Venus	Pass	Fail	Pass	Pass
Non-Approved Supplier	Pass	Fail	Pass	Pass

Microfiber Bar Mop Suppliers (50 IL)	Ketchup	Mustard	Coffee	Bacon Grease
American Dawn	Pass	Pass	Pass	Pass
Calderon Textiles	Pass	Fail	Pass	Pass
Golden Star	Pass	Fail	Pass	Pass
Venus	Pass	Fail	Pass	Pass

AATCC Test Method 61-2012: Colorfastness to Laundering: Accelerated
The subjective color retention evaluation was completed to determine which cotton bar mops retained whiteness and color after 25IL and which microfiber bar mops retained their whiteness and color after 50IL. The majority of the bar mops yellowed as they were washed. This is most likely due to the mix of multiple stripe colors in the same wash load. Please see the attached spreadsheets below for high level results.

Supplier	Color Retention after 25 IL/50 IL	
	Cotton (25 IL)	Microfiber (50 IL)
American Dawn	Slightly yellow with darker stripe	Slightly orange/yellow
Baltic	Slightly yellow with darker stripe	---
Calderon Textiles	Slightly yellow with darker stripe	Slightly orange
Golden Star	---	Slightly yellow
Venus	Slightly yellow	Moderately orange
Non-Approved Supplier	Slightly yellow with darker stripe	---

ASTM D 4966-2012 Standard Test Method for Abrasion Resistance of Textiles Fabrics- Modified Abrasion

Abrasion was evaluated on a bar mops from each cotton supplier after 10IL, 25IL and after 50IL for each microfiber supplier. Each bar mop was compared to the ASTM standard and rated on a scale from 1 to 5 with 1 being very severe visual abrasion and 5 being no visual abrasion. The table below lists the average rating given to the supplier's bar mops after 25IL and 50IL.

Supplier	Average Abrasion Rating (25 IL & 50 IL)	
	Cotton (25 IL)	Microfiber (50 IL)
American Dawn	Pass	Pass
Baltic	Pass	---
Calderon Textiles	Pass	Pass
Golden Star	---	Pass
Venus	Pass	Pass
Non-Approved Supplier	Pass	---

***Minimum of 3 for passing score

CSC is pleased to report that, in most cases, our approved suppliers passed the tests that were performed. CSC will continue to work with our suppliers to improve those test areas that failed.

Summary

- All suppliers' cotton and microfiber bar mops passed the breaking strength test.
- All suppliers' cotton and microfiber bar mops passed the dimensional changes test.
- All suppliers' cotton bar mops passed the ketchup, coffee, and bacon grease soil release tests. All suppliers' cotton bar mops failed the mustard stain release test.
- All suppliers' microfiber bar mops passed the ketchup, coffee and bacon grease soil release tests. All but American Dawn (ADI) failed the microfiber bar mop soil release test for mustard.
- There were slight variations in change to colorfastness with most displaying more yellowing during washings.

CSC will continue to conduct periodic product testing to ensure product quality for superior service to your customers. If you have any additional questions please contact CSCNetwork.