Minutes of November 12, 2014
AATCC Chemical Applications Interest Group

Nelson Houser, Chair Presiding

The meeting was called to order by Chair, Nelson Houser at 10:15AM.

The minutes from May 2014 were approved.

PRESENTATIONS:

Topic: Accessing the AATCC Textile Complete EBSCO Database & Article Archive.
Maria Thiry - Director of Publications and Membership, AATCC,

Maria had a very interactive presentation and demonstrated step-by-step how to log on and use the database in a variety of search options including such options as by author, topic, time frame, or even a table or data. She pointed out the various tutorials available on learning how to use the EBSCO database. Also, she noted the app available for both i-phone and Android.

Demonstrated were the search options including basic search and advanced search. For example, one can search specific for peer reviewed and full text articles within a published date timeframe.

Articles can then be printed, emailed, saved, cited, or export a single result from the detailed record. Also, one may create search alerts that will give one an email notification with new results are available.

An excellent presentation that was well received. It was obvious that many of the attendees were unaware of the program's availability to members.

Topic: Cationic Dyeable Fibers: What I thought I knew (or Lessons Learned)!
Nelson Houser, M. Dohmen USA

Presentation focused on modacrylics, acrylics, cationic-dyeable polyester, and aramids. Highlights included the following.

Modacrylic and acrylic fibers covered fiber definitions and fiber producers with focus on the low percent of fiber structure that have dye sites, end-uses and key functional performance areas. Emphasis was then placed on utilization of the fiber saturation values, dye saturation

factors, and formulas to ensure optimum formulation developed and avoid colorfastness or excessive dye use, K-Values for dye selection, and knowledge of glass transition (Tg or second order of transition) to control dye exhaustion and levelness. Also shown was an afterscour procedure for cationic dyes to improve wash fastness when there is a problem.

Cationic-dyeing polyester included discussions about the use of PC Values (compatibility values), the rapid dye exhaust within in a narrow temperature range, and generally poor migration that requires the wet processor to design the procedure for level dyeing. Also, shown was the importance of knowing the fiber performance as 5 different cationic-dye able fibers exhibited significant dyeing rates that, if unknown to the wet processor, could present major problems in levelness and shade reproducibility.

Lastly, aramid fibers (Nomex and Kevlar) are specialty, high performance fibers for flame-resistance and ballistic programs. Key to dyeing of aramid fibers is the high use of carrier (often more expensive than the dyes) and the importance of maximizing the carrier concentration for shade reproducibility, dyeing efficiency, and maximum fastness. The major carriers are glycol ethers, benzyl alcohol, acetophenone (minor, enviro issue) and some specialty patent protected products. Illustrated were different evaluations of carriers and carrier concentrations where the residual dyebath and soap-off baths were saved to observe “least amount of unused dye.”

Another point of interest was maximizing the sodium nitrate (key to making the carrier effective in exhausting the cationic dyes). Some experiments have indicated we could increase the sodium nitrate and reduce the amount of carrier.

Overall, emphasis was on knowing the fiber and fiber properties, know the dyestuff and performance properties, and know how the dyeing system will exhaust and migration to ensure levelness, shade reproducibility, and best fastness.

OLD BUSINESS: None.

NEW BUSINESS:

Moisture Management Program (October 8-9, 2014). 126 in attendance. 52 responded to the on-line survey and very positive.

RA92 Interaction of Dyes and Finishes – Developing the “Wet Processing of Textiles with Spandex: Best Practices.” February 11-12, 2015 at Textile Technology Center (TTC), Belmont, NC. Touring the facility will be part of program.

CAIG Track for 2015 International Conference, March 24-26, 2015 at DeSoto Hilton, Savannah, GA. 11 presentations covering 3 sessions have been confirmed. Additionally, the CAIG includes the Herman and Myrtle Goldstein Student Paper Competition.

CAIG Positions Approved:
CAIG Chair 2015 – 2016: Mike Tyndall of Cotton Incorporated nomination approved.
CAIG At-Large Member: Mike Cheek of Huntsman nominated for a second 2-year term.
CAIG Vice-Chair: Kanti Jasani renominated for 2015.
CAIG Secretary: Bert Truesdale, Tencate, renominated for 2015.

CAIG Student Poster Competition: There has been some discussion from a couple of student chapters about Student Poster Competition. However, the suggestions were informal and the issue, which presents a concern about adversely compromising the effectiveness of the HMGSPC program, has been turned back to the Education Advisory Board/Textile Education Committee for a formal questionnaire to the student chapters.

Future Programs/Symposia: May consider a planning session for antimicrobial, high-visibility, UV protection, Fire Protection etc. People are looking for Functional Textile topics. A call for recommendations from the committee was made.

Next meeting will be May 5-7, 2015 during Spring TCR at The Doubletree by Hilton, Raleigh-Durham Airport, Durham, NC.

With no further business, the meeting was adjourned at 11:42 M.

Respectfully submitted,
Bert Truesdale, Secretary

Sent to Members 12-5-14