Tobacco Science Research Conference

Instructions for the Preparation of Abstracts

Circle one: Presentation Poster

NOTE: The abstract must contain a meaningful summary of the material to be presented. It must include the objectives of the research efforts, the methods used, and the results obtained. The editorial committee reviews and accepts papers based on the abstract. Very short or vague abstracts will not be accepted.

Please type name, address, and phone number of principal author below.

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Circle one:
35 mm slides

PowerPoint

FORMATION OF POLYCYCLIC AROMATIC HYDROCARBONS FROM THE GAS PHASE PYROLYSIS OF STEROLS: THE ROLE OF RESIDENCE TIME.

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There have been numerous studies on the formation of polycyclic aromatic hydrocarbons (PAHs) from the pyrolysis of tobacco components, especially those found in the hexane or petroleum ether extract of tobacco. Early studies focused on the effect of temperature on PAH yields, while later studies adjusted the pyrolysis conditions to produce PAH profiles similar to that found in cigarette smoke condensate. Unfortunately, all these pyrolysis studies have long residence times (typically minutes) which are not relevant to the unique conditions found in a burning cigarette in which volatile species have residence times of <1s in the hot zone. This fact questions whether the specific tobacco constituents, such as sterols and terpenes, that have been correlated with PAH formation based on long residence times pyrolysis experiments are the same constituents that form PAHs in a burning cigarette. In this presentation, the impact of residence times on the yield of PAHs formed from the gas phase pyrolysis of sterols, such as stigmasterol, will be presented. The flow pyrolysis of sterols (in helium or 5 % O_2 in helium) will be investigated with residence times of 100 – 2000 ms and temperatures of 500 – 800 °C. The goal of this fundamental research is to determine the role of gas phase reactions in PAH formation, and to gain insight into the kinetics and mechanisms of PAH formation for constituents found in tobacco.

1. The abstract should be 180-225 words in length and be included in the space designed above. IN ADDITION TO THE PRINTED COPIES, THE ABSTRACT MUST BE SUBMITTED AS A WORD PROCESSING FILE ON DISKETTE. Label the diskette with the principal author's last name and specify the word processing package used. In addition, abstracts can be sent to the TSRC Editorial Committee via email: *LewisL@rjrt.com.* SENDING VIA EMAIL WILL PROVIDE ADDITIONAL ASSURANCE OF TIMELY DELIVERY AND NOTIFICATION OF RECEIPT, BUT IS NOT INTENDED TO SUBSTITUTE FOR SENDING THE PRINT/DISKETTE COPY. If the abstract is sent via email, it should include all the information requested above as text.
2. Please note the following:
   (a) Title all in capitals, the name of presenting author is underlined.
   (b) Location and postal/zip code follows author's name, if multiple authors are at different locations.
   (c) Use 12-point fonts such as Arial or Courier if possible.
3. Mail 3 copies of the abstract and the diskette to Leslie S. Lewis, Chair, TSRC Editorial Committee, R. J. Reynolds Tobacco Co, P.O. Box 1487, Winston-Salem, NC 27102-1487 USA.
4. Abstracts must be received no later than **June 2, 2000.** Confirmation of receipt of the abstract will be provided to the principal author via email or surface mail. **If you do not receive confirmation of receipt, assume the abstract was not received and contact Leslie S. Lewis by June 15, 2000.** (Phone 336-741-4467; Fax 336-741-0918; email: LewisL@rjrt.com

OTHER:

PowerPoint (see cover letter) or 2"x2 (35mm) slides (max. thickness of 1/8") may be used for presentations.
The maximum presentation time is 15 minutes, with 5 minutes for discussion.
COMPANY LOGO IS PERMITTED ONLY ON TITLE SLIDE.