



Food Oral Processing Laboratory

Newsletter 3

October 2016



OUR MISSION

FOP Group have been busy attending discussions and conferences. Led by Dr. Xinmiao Wang, students of the FOP group participated in organizing the 2nd Asian Sensory and Consumer Research Symposium, held in Shanghai between 15th and 17th of May 2016 and actively participated as volunteers. Members included *Master students*: Lv Zhihong, Gang Zheng Ying, Huifang Cai, Lv Cong; *PhD student*: Ms. Xia Hu; *Postdoctoral fellow*: Dr. Rutuja Upadhyay. Prof. Jianshe Chen was the key member of the scientific committee and had two invited lectures at the Conference. FOP students presented posters which received a very good response from the delegates from industry and academia. There was wonderful exchange of ideas during the Food Oral Processing conference workshop and the FOP members Marco Morgenstern, Prof. Jianshe Chen and Dr. Rutuja Upadhyay had all the questions answered from the audience. Hopefully next year the FOP students will pluck up the courage to contribute towards oral presentation during the next International Conference. Zhejiang Gongshang University was the co-organizer of the conference.



WORKSHOP AT SENSEASIA 2016: FOP Group had organized a workshop at SenseAsia on () (). The session was chaired by Marco Morgenstern, New Zealand Institute for Plant & Food Research Limited. Topics included were:

1. Oral physiological and food physical perspectives of eating and sensory perception

J. Chen, Zhejiang Gongshang University, China

2. Importance of dynamic texture for flavor and interactions with consumers

D. Paredes, Takasago International Corp (USA), USA

3. Tribological approach to the sensory properties of oil-in-water emulsions

R. Upadhyay, J. Chen, Zhejiang Gongshang University, China



FOP WORKSHOP Q&A SESSION

FOP OUT & ABOUT

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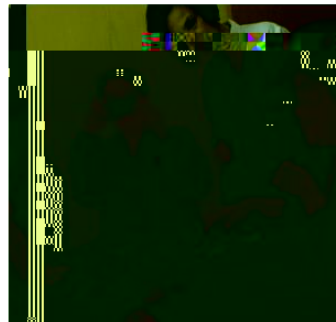
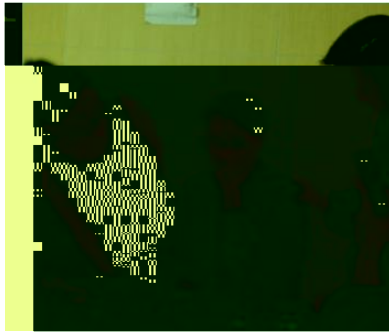
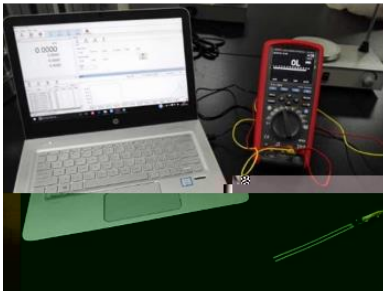
MS. GANGYING ZHENG, MS. MINGSONG SU & ZHIHONG VISIT TO SHANGHAI HUADONG HOSPITAL

China has stepped into an aging society. With the increase of age and recession of physiological function, health problems are becoming a big challenge for elderlies, especially, eating and swallowing problem. Chewing and swallowing disorders may cause nutrient deficiency even causing choking. Main objectives of the investigation were to (1) establish feasible techniques for assessing major oral physiological properties of elderly patients; (2) establish possible correlations between those oral physiological properties and their influences on the eating and swallowing capability of elderly patients; and (3) establish reliable and objective methods for texture standardization of those elderly patients.

The Iowa Oral Performance Instrument (IOPI® Medical LLC Redmond, Washington, USA) and in-house made device for biting force for measuring main oral physiological properties. Another part of the experiment was eating and swallowing capability. Water swallow test and Volume-viscosity swallow test (V-VST) were used for testing (swallowing capability. And the samples which involved in V-VST test is different concentration of 0.54%, 1.16%, 2.36% prepared according to IDDSI Standardization. The participants we recruited were the elderly who had different levels of dysphagia problem. First stage patient tests have been completed at Shanghai Huadong hospital. Second part investigation is planned for October/November. This project is sponsored by Chinese Society of Nutrition.

LV ZHIHONG,

I was so glad and lucky to be a summer intern in the instrumental team of product performance evaluation (PPE) group, Research and I (Shanghai). My task was to investigate correlations between instrumental data and sensory perception based on the data collected from 100+ skin parameters and 3 questionnaires from 120 volunteers, and then to decode them. However, it is difficult to determine this kind of correlation because of large set of data. I learnt and used different statistical methods to find correlations. When I met some intricate problems, I tried to make links with other departments, e.g. scientific computing team, and tried to come to a solution with the help of some valuable suggestions. Fortunately, hydration perception was found to have a high correlation with a kind of optical effects. My line manager was satisfied with the new finding and was ready to establish a new methodology on instrument to predict hydration perception which is quite good to reduce (ability of statistical analysis has been enhanced significantly. A wonderful experience indeed!



HUIFANG CAI, AGRICULTURAL PRODUCTS PROCESSING RESEARCH INSTITUTE, GUANGDONG

I got an opportunity to do my internship at the Agricultural Products Processing Research Institute, Guangdong. The project title was (processing study of *Moringa* and microencapsula (closely with the extract processing and analysis of nutritive composition from *Moringa* leaves. The nutritive composition included reducing sugar, polyphenols, protein, vitamin C, total flavonoids and so on. The relevant products such as *Moringa* tea, *Moringa* candy were also explored during my internship. I also helped fellow mates with the writing skills for two of their publications and also learnt about how to write a patent.

IDDSI MEETING: Industrial partners from Qirui Pharmaceutical Ltd. Jiangsu, Jian An Pharmaceutical Ltd., Shenzhen, Suzuken Co. Ltd. & Nutri Co. Ltd. from Japan and Prof. Zulin Dou from Zhongshan University met Prof. Jianshe Chen for discussion of the design & standardization of dysphagia food and for possible multipartner collaboration.

