

CELEBRATING
COMMERCIALISATION
YEAR 2014

iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention
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exposition 2014

INNOVATEUR
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2014

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UNIVERSITI TEKNOLOGI MARA
MALAYSIA

*Bridging
the valley of death :
advancing the
commercialisation
of research*

RESEARCH BOOK

iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

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FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed
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ORALEC ANTIINFLAMMATORY MOUTHWASH

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Brushing and flossing teeth regularly are the basic dental care practices to prevent tooth decay, bad breath and keep the teeth white from stain by food, drinks and tobacco. However, it is not enough to keep your oral cavity away from oral microorganism. Gingivitis is one of the common gum disease (periodontal disease) caused by bacterial biofilms (plaque). Symptoms of gingivitis such as swollen gums, bright red or purple gums, bleeding gums, bad breath can cause discomfort and pain. Gingivitis occurs when oral hygiene is not taken seriously and may progress to periodontitis resulting in loosening of teeth. To solve this problem different mouthwashes have been introduced on the market as a supplement to toothpastes. In the Middle Ages people rinsed their mouth with vinegar and rose water and today the production of mouthwashes is a big industry almost as big as manufacturing of toothpastes. A mouthwash is defined as a non-sterile aqueous solution used mostly for its deodorant, refreshing or antiseptic effect. It is needed to keep the germs away and improve oral hygiene. However, some of mouthwash products in the market contain alcohol. More than 25% alcohol in mouthwash was reported to cause epithelium detachment, mucosal ulcerations, gingivitis and petechiae. Meanwhile mouthwash added with more than 10% ethanol will cause oral pain. The more ethanol added with longer rinsing duration will increase the pain. Herbs are believed to help relieve oral problems like inflamed gums, bad breath and toothaches. Our OralEC Mouthwash was created for the relief of painful inflammatory conditions of the mouth using natural ingredients and also helps cure mouth infections. OralEC Mouthwash is a non-alcohol mouthwash which was formulated using a combination of several natural botanical extract for longer fresh breathes. It helps to relief pain and reduces inflammation due to gingivitis. OralEC Mouthwash consists of *Erythroxyllum cuneatum* (Cintha Mula) leaf extract, a plant that can be found in South America, Africa, South East Asia and also Madagascar which has been proven scientifically to reduce inflammation such as swelling and pain. It has been tested and proven safe for ingestion. The extract showed potent anti-inflammatory and anti-nociceptive activities. Other *Erythroxyllaceae* species has been reported to be used to treat respiration infection such as bronchitis by chewing the dried leaves. It is also reported that plants from this family has been used in beverages and proprietary medicines. Leaves of one of the plants of this family contain an alkaloid used as local anaesthetic and in other species from the same family showed potent anti-inflammatory activities. OralEC Mouthwash also contains mint oil and xylitol. Mint oil gives OralEC Mouthwash a fresh and cooling sensation which is effective in killing bacteria that cause bad breath and as prevention from tooth decay. This essential oil has anti-bacterial activity by altering bacterial cell wall and adds a minty flavour to the mouthwash. Xylitol is a sugar alcohol that could not be fermented by oral microorganisms. It is included in the formulation to help reduce number of bacteria, reduce caries problem and helps to remineralize deeper layers of demineralized enamel. By rinsing or gargling 15 ml (approximately 1 tablespoonful) of OralEC Mouthwash every 1.5 to 3 hours, could help to relief pain and reduce swelling of the gums. You will get healthy gums and teeth with OralEC Mouthwash and leave your teeth and gums feeling so clean and refresh.