



Press information

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## **Paper hand towels once again proven to be the most hygienic option for washrooms as compared to jet air driers**

### **Users of jet air driers likely to be exposed to 1000 times more microbes**

**Brussels, 5 April, 2013 – On average, a user of a jet air drier is likely to be exposed to over 1000 times more micro-organisms than the user of paper hand towels. This is one of the key findings of a recent study by Eurofins-Inlab. In washrooms, where hygiene matters, paper towels are superior to jet air driers.**

This is another strong endorsement of the hygiene benefits that are inherent in the use of paper hand towels when drying hands. Paper towels dry the hands efficiently and reduce the spread of microbes.

The Eurofins-Inlab study (Germany, 2012) was commissioned by ETS – European Tissue Producers to compare the contamination of the surfaces of paper hand towel dispensers, warm air driers and jet air driers and the floors below the devices. Eurofins-Inlab tested 150 washrooms, equipped with warm air driers (50), jet air driers (50) or paper hand towel dispensers (50). These washrooms were picked independently by the laboratory; ETS has no information as to their location. The selection was balanced to represent high versus low use settings.

For each washroom the institute sampled the surfaces of the hand drying devices that were the most likely to be touched. The floors underneath the devices were also tested as contamination on the floors can be taken outside the washroom via the shoes. The results showed that the inside of jet air driers and the floors below them were significantly more contaminated than paper hand towel dispensers.

The findings once again confirm the superiority of paper hand towels when it comes to hygiene performance in public washrooms as compared to jet air driers.

#### **Findings as to microbiological counts on the devices:**

- On average, a user of a jet air drier is likely to be exposed to over 1000 times more microorganisms than the user of a paper hand towel dispenser;
- On average the user of a jet air drier is likely to be exposed to around 800 times more potentially harmful Staphylococci than the user of a paper hand towel dispenser.
- More than half of the jet air driers were contaminated by coliforms, whereas none were found on the paper hand towel dispensers.

#### **Findings as to microbiological counts on floors:**

- The floors under jet air driers had on average 20 times greater levels of contamination when compared with the floors under paper hand towel dispensers.
- The floors under jet air driers had on average 27 times greater levels of Staphylococci when compared with the floors under paper hand towel dispensers.
- Coliforms were detected in 46% of the samples taken from the floors below jet air driers, whereas only 10% of the samples under the paper hand towel dispensers contained coliforms.

Surface area sampled was 100 square centimetres for all floors tested.

### **Micro-organisms transferred by touching**

Hands are likely to be heavily contaminated with bacteria, viruses or yeasts before washing. After washing, water on the hands will contain microbes which have the potential to be transferred to the drying equipment and washroom surfaces during the drying process. Paper hand towels, due to their excellent absorption capacity, remove water and microbes from the hands and therefore do not contaminate the washroom surfaces. Moreover, paper hand towel dispensers are less likely to be touched therefore avoiding cross-contamination risks.

In a recent observational study in the USA, commissioned by the Kimberly-Clark Corporation, one or both hands of all subjects (n=120) touched the blades of a jet air drier during hand drying; the average number of observed device touches by hands per drying was 13.

### **Confirmations from the scientific world**

Professor Mark Wilcox (MD), Professor of Medical Microbiology, University of Leeds and Head of Microbiology, Leeds Teaching Hospitals, Leeds, UK, underlines that good hand washing and careful hand drying are essential to prevent microbe spread. *“From the results of the current study, it appears that there may be a greater risk of exposure to microbes associated with some types of hand driers. There was an increased level of microbial contamination on and beneath air driers, particularly jet air driers. These findings have implications for the prevention of spread of microbes and infections, that should be explored further”*, concludes Prof. Wilcox.

In August 2012, a literature survey was carried out from January 1970 to March 2011. It identified, analyzed and reviewed all relevant studies in English in the renowned Mayo Clinic Proceedings, USA. It reaches the clear conclusion that: *“From a hygiene viewpoint, paper towels are superior to electric air driers”*.

Roberto Berardi, Chair of ETS concludes: *“Paper is the most hygienic way of drying hands compared to air. With each new study we find extended evidence of this scientific fact. And very reputable organizations such as the World Health Organization and now recently also the flagship journal of the Mayo Clinic and arguably one of the premier peer-reviewed clinical journals in general medicine, Mayo Clinic Proceedings, confirm that from a hygiene viewpoint, paper towels are superior to electric air driers. We will continue to inform all who are dealing with matters of hygiene that the use of single use towels is the best solution to prevent the spread of microbes in care sensitive environments.”*

More information:

<http://www.europeantissue.com/hygiene/newstudy>

[http://mayoclinicproceedings.org/article/S0025-6196\(12\)00393-X/fulltext](http://mayoclinicproceedings.org/article/S0025-6196(12)00393-X/fulltext)

About ETS

*ETS is the European Tissue Paper Industry Association. The members of ETS represent the majority of tissue paper producers throughout Europe and around 90% of the total European tissue production. ETS was founded in 1971 and is based in Brussels.*

About Eurofins-Inlab

*Inlab was founded in 1992 as a microbiology laboratory of food. Inlab is member of the Eurofins Group since December 2007. Inlab provides microbiological testing, expert advice, training courses and inspections, as well as sample drawings in all areas from food, drinks, dispensing equipment, sanitary products, drinking, mineral and medical water, hygiene of companies, compost.*

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