

GOOD PRACTICES AND TECHNOLOGIES

Reducing WATER FOOTPRINT

El Agua Nos Une – SuizAgua América Latina



Reuse of water in the washing system in the ice cream line

SDGs addressed: 6.4 Water efficiency



Implementing Company

Nestlé Perú

Sector: 1050 Manufacture of dairy products

Location: Nestlé, Cercado, Lima, Perú
Coord. UTM 8'656,199.24 N 281,326.06 E

Last update: 2015, November



Results

- Reduction on water use 26,050 m³/year



Additional benefits

- 50,916.06 USD/year saved for the reduction of payment for the use of industrial water



Supplier references

Supplier: Internal Engineering Dep.



Implementing Company

Implementing Company: Nestlé Perú

Contact information: Fernando Maceda

e-mail: Fernando.Maceda@PE.nestle.com



Description of good practice

In the Nestlé ice cream production plant (D'onofrio), the washing process is constant in 40 maturation tanks and 11 lines of ice cream production with the Cleaning in Place (CIP) system. CIP consists in the circulation of washing liquids (water-acid and base), through machines, pipes and other equipment into a washing circuit. When CIP is applied, the blending of water, detergent and disinfectant passes through at high velocity and eliminates the waste in ice cream lines and maturation tanks. During CIP washing process, there are 3 phases with water: first, there is a pre-rinsing phase to clean residues of ice cream preparation; the second phase consists on washing tanks after applying acid and base; and, third phase consists on a rinsing process. All the process used drinking water which was disposed to wastewater treatment plant and then to sewerage system. Nestle identified the opportunity to reuse water of the last washing phase, storing water between cycles to use it in the first washing phase. After implementing this project, water consumption decreased in 26,050 m³/year, saving water resources. Principal activities: implementation of a 3 m³ tank to store water from the last washing phase, installation of 20 meters of pipes to reinject residual water, change of CIP process control panel, consumption water monitoring (monthly)



Investment and operational costs

Costs: 9,220.30 USD/12 months



Recommendations and limitations

- No recommendations



Applications

Do not apply



References / links

- Agencia Suiza para el Desarrollo y la Cooperación COSUDE, ONG Agualimpia, Empresas socias (2015). Guía de buenas prácticas para el uso eficiente de agua en empresas SuizAgua Andina Perú. In: <http://bit.ly/GuiaBuenasPracticasSuizAguaPeru>