



## SUCCESS STORY

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GLASCO UV manufactures ultraviolet disinfection systems for treating liquid sugar. Special 254 nm germicidal low pressure UV lamps are integrated to optimize disinfection and provide the lowest operating temperature.

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# UV DISINFECTION LIQUID SUGAR

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The “IL-LS” systems are specially designed to treat liquids in a thin film manner. Lamps are spaced close together to force the liquid to be exposed to high doses of UV energy.

The systems are designed to treat opaque and thick liquids, syrups with high osmotic pressure (brix 25-67), sucrose, high fructose corn syrup, glucose, juices and other base materials.



## CUSTOMER

Beverage Manufacturer

## SYSTEM

IL-LS-5000-20

## CAPACITY

100 gpm - 23 m<sup>3</sup>/hr

## TYPE

Liquid sugar Sucroseed  
High Fructose Corn Syrup

## TECHNOLOGY

Low pressure high output

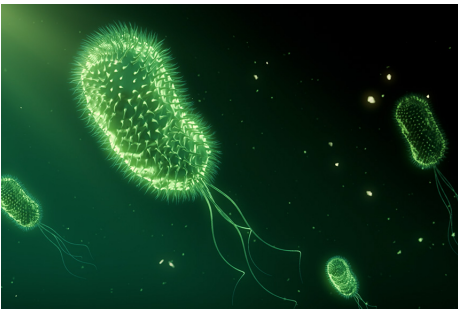
Low Pressure

ultraviolet lamps

produce less heat

when compared to

Medium Pressure



# THE CUSTOMER

Large beverage manufacturing and bottling facility processes its own liquid sugars (sucrose, high fructose corn syrup). As liquid sugars are rich in nutrients, they are a potential breeding ground for microorganisms.

# THE CHALLENGE

Liquid sugars are viscous and have low UV transmission. In order to disinfect, the UV light needs to penetrate the liquid.

UV disinfection systems incorporate special lamps that create heat. Too much heat can damage the liquids, cause product buring and internal quartz sleeve fouling. Batches that are compromised need to be sent to waste causing both production and financial loses.

# THE SOLUTION

The “IL-LS” Series is designed in a “thin-film” manner. By closely grouping the UV lamps and their associated quartz sleeves, the area for the liquid becomes limited and forces it closer to the UV lamps.

Unlike medium pressure systems that use very powerful UV lamps, low pressure UV lamps can be cooled and will operate at much lower skin temperatures (up to 70% lower skin temperature).

System provided with shroud cooling and PLC automation.

# THE RESULTS

The installed system provided the disinfection results. Customer’s benefits includes faster warm up and cool down cycles, built in redundancy with a greater number of lamps and significantly lower heat.



Remote Ballast Control Center (BCC) houses ballasts, controls, monitors and PLC.



Sanitary piping for Sucrose, HFCS and Clean in Place. The UV system is manufactured from 316L electropolished stainless steel.

REDUCED  
HEAT  
BY  
60%



Lamp cooling shrouds are integrated on to each end to provide optimum UV output and cool operating temperature.

## LIQUID SUGAR UV BENEFITS

- Non chemical method for controlling microorganism growth
- Reduces food discoloration
- Increases shelf life
- Helps maintain flavor
- Instantaneous kill
- Effective on a wide range of pathogens
- No heat treatment in processing
- No change in odor, color or taste
- No residuals left in liquids



Contact us at [info@glascouv.com](mailto:info@glascouv.com) or visit [glascouv.com](http://glascouv.com) for more information