Anton Paar

– CUSTOMER SUCCESS STORY –

Bengal Beverages PVT. LTD in West Bengal, India.

Complete control of the production process and quality of bottled soft drinks

Keeping the production plant running at its highest capacity and still being sure that the bottled product has a consistent high quality – these are the two challenges facing soft drink bottlers around the globe. At the Bengal Beverages production plant in India, the solution is found in a combination of knowledgeable QA personnel, dependable online measuring sensors, and high-quality lab instrumentation from Anton Paar.

Relevant for: soft drink producers

Bengal Beverages PVT. LTD manufactures and distributes non-alcoholic beverages under license from Coca-Cola. The West Bengal plant produces sparkling soft drinks such as Coca-Cola, Sprite, and the popular Indian soda brand “Thums Up”, as well as bottled fruit juice and water. Production has to meet both the exacting standards of the Coca-Cola Company and also the demands for quality beverages from consumers in India.

At work ensuring the highest quality every day

Mr. Apurba Roy, QA manager for the West Bengal plant of Bengal Beverages, is no stranger to the ups and downs of plant management. He has been in his current position for nine years and has observed a steady move towards an all-round approach to quality control which includes checks on the beverages in the production line supported by final checks carried out in the laboratory. As Mr. Roy confirms: “At Bengal Beverages we need high system accuracy and we get it from the combination of strong online monitoring and even stronger checks from the laboratory.”

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The bottling plant runs 5 production lines. Installed in each line – and monitoring production round the clock – is either a Cobrix 3 or Cobrix 5 beverage analyzer from Anton Paar. This system measures the CO_2 and actual Brix content of the soft drink and gives a complete picture of the current status of all production lines on one screen. Any deviations from the specified values result in a warning both on the screen and on the production plant floor and allow the QA team to take immediate action to prevent out-of-spec product being bottled.

Full support from the QA laboratory

To support the online measuring systems Bengal Beverages has a well-equipped QA laboratory. Two Anton Paar density meters – a DMA 4500 M and the older model DMA 4500 classic – are at work measuring the Brix concentration of between 60 and 70 samples per day in order to give the final OK on the quality of batches and also supply the Cobrix units with values for adjustment. Alongside the density meters there is also a Packaged Beverage Analyzer for soft drinks (PBA-SI) with and without invert sugar, also from Anton Paar. This is used daily for determining the CO_2 content, Brix, and degree of inversion in the finished soft drinks directly from the bottle or can in order to ensure that all beverages leaving the plant have a consistent carbon dioxide content and production is kept within the specifications.

Remembering the purchase of the first DMA M density meter back in 2010, Mr. Roy explains: “We looked at the instruments on the market and the Anton Paar density meter gave the best accuracy for the price and had good support on offer locally from Anton Paar’s subsidiary in India.”

The strong QA laboratory has been instrumental in helping Bengal Beverages build up a reputation for high-quality soft drinks on the Indian market. The company supplies a large network of retailers in the West Bengal area.

Online and offline measurements give the whole picture

Continuous monitoring of online values backed up by QA values from the lab ensure that production and bottling run smoothly and the finished soft drinks meet all requirements. The QA team has production under control and customers are happy to reach for refreshments which have a consistent taste and quality. Mr. Roy summarizes his work with the Anton Paar density meter: “Our DMA 4500 M and the other Anton Paar instruments have been helping us maintain tight control of process specifications and ensure that the quality of our products meets global standards.”

Main points at a glance

SAMPLES Sugared soft drinks with and without sugar inversion

INSTRUMENTS DMA 4500 M, PBA-SI packaged beverage analyzer for soft drinks with sugar inversion, Cobrix 3 and Cobrix 5 online beverage analyzers

ACCURACY 0.00005 g/cm³ (density meter), 0.000001 g/cm³ (PBA-SI)

SAMPLE THROUGHPUT 60 to 70 samples/24 hours measured on the DMA 4500 M density meter