

Anitoa launches computer-vision guided collaborative robot for qPCR sample preparation

Anitoa launches computer-vision guided collaborative robot for qPCR sample preparation, enabling automated sample-to-answer molecular testing

SUNNYVALE, CA, UNITED STATES, October 21, 2024 /EINPresswire.com/ -- Anitoa Systems, LLC., a Silicon Valley biotechnology company and market leader in rapid, portable molecular testing, today announced the launch of a computer vision guided collaborative robot (Cobot) system for automating qPCR sample preparation. Code named Maverick RT, the Anitoa sample preparation cobot relies on computer vision instead of rigid position-actuation to achieve precise motion control required to handle liquid dispensing and pick-and-place of consumables such as qPCR test tubes.



Maverick RT a sample preparation robot for molecular testing automation by Anitoa

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With the advancement in AI, computer vision technology, we finally see a path to offer lower cost and reliable collaborative robot solution for automated sample preparation in molecular testing”

Li Liu, managing director

Anitoa uses lower cost and compliant joint actuators to power its robotic manipulators. This technology makes the cobot to be safe and reliable in the lab environment. The computer vision system also detects abnormal conditions such as dropped pipette tips, misplaced consumables rack etc., preventing waste of material and ensure correct test result with minimum operator hands-on time.

Already a market leader in portable qPCR instruments before and during the COVID pandemic, Anitoa Systems sees the lack of skilled operator a bottleneck to molecular testing for human disease diagnostics as well as testing of

food and environmental samples. Traditional liquid handling robotic systems for molecular

sample preparation are too expensive and complicated to operate.

"For many years, our customers have been asking for a lower cost and reliable solution for automated sample preparation to achieve sample-to-result simplicity", said Ms. Li Liu, managing director of Anitoo Systems, "with the recent advancement in AI, computer vision and robotics technology, we finally see the technology is ready to address this important market need, and we are excited to be at the forefront of bring this technology to our customers."

About Anitoo

Anitoo Systems, a medical device technology start-up established in 2013 with headquarter in Sunnyvale, California, develops highly integrated and low-power CMOS-based bio-sensor devices for fluorescence and chemiluminescence-based molecular imaging. By replacing the traditional bulky and costly photon-multiplier tube (PMT) and CCD-based optical sub-systems, Anitoo's ultra-low-light CMOS sensor technology enables a new generation of compact and inexpensive molecular testing platforms targeting infectious and oncology markers, as well as pathogens in our food and environment. Anitoo manufactures its qPCR instruments in Hangzhou, China and Fremont, California, USA. For further information please use Anitoo Sales & PR Contact: Li Liu, Anitoo Systems, LLC, or 408-887-6026. www.anitoo.com

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