

Performance Testing for Axygen® Automation Tip (TT-200-CBK-HTR)

Application Note



Method

The LiHa on the Tecan® Freedom EVO® liquid handling workstation was used to assess precision as coefficient of variation (% CV), and accuracy as percent deviation (% D), for Axygen 200 µL tips.

To test the ability of the tip to dispense accurately and precisely at two dispense volumes, 20 µL and 200 µL, a column of 7 tips aspirated from an Axygen low profile reservoir (Corning Cat. No. RES-SW96-LP) and dispensed into a Corning® 96-well, black, clear bottom microplate (Corning Cat. No. 3631).

For the 20 µL test volume on the LiHa, a column of 7 tips were arranged so that each tip aspirated 20 µL of Range B solution (Artel Cat. No. MVS-204) and dispensed 20 µL into 180 µL of

diluent solution (Artel Cat. No. MVS-202) in each well. For the 200 µL test volume on the LiHa, a column of 7 tips were arranged so that each tip aspirated 200 µL of Range A solution (Artel Cat. No. MVS-203) and dispensed 200 µL into 0 µL of diluent solution in each well. To determine the volume of liquid dispensed in each well, absorbance readings for the solutions (diluted Range B solution for 20 µL dispense and Range A solution for 200 µL dispense) were measured using an Artel ELx800NB® plate reader (Artel Cat. No. 1311197). Each study was performed 6 independent times for a total of 42 tip dispenses for the 20 µL and 200 µL test volume. Evaluation criteria include % D from the set dispense volume and % CV of the measured dispense volume for the tip dispenses.

Results

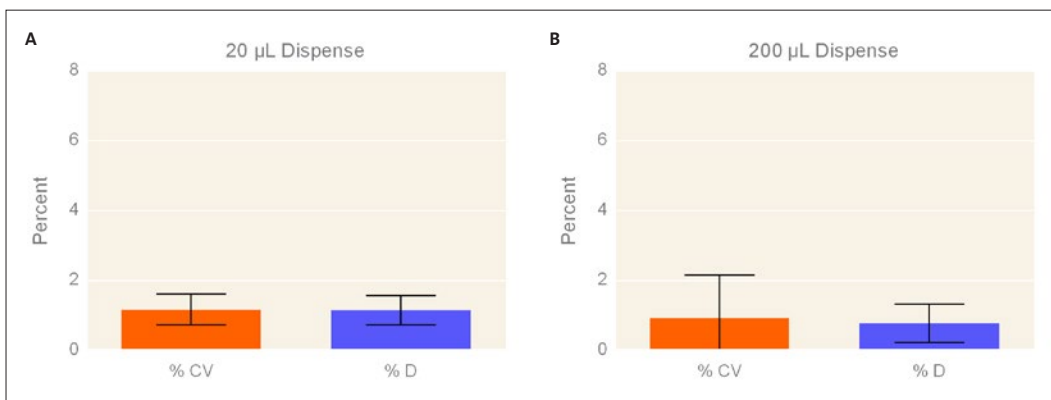


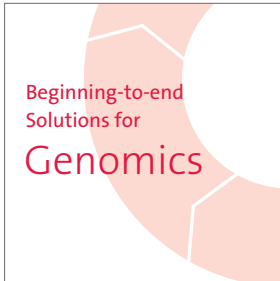
Figure 1. Analysis of TT-200-CBK-HTR tip with aqueous dispense. The precision (assessed by % CV) and accuracy (assessed by % D) of Axygen TT-200-CBK-HTR tips dispensing (A) 20 µL and (B) 200 µL volumes using the LiHa on the Tecan Freedom EVO liquid handling workstation were determined using the Artel MVS® system. The % CV and % D were below 1.5% for both 20 µL and 200 µL dispenses.

Table 1. Aqueous Dispense Results

Target Volume (µL)	20	200
n	42	42
% CV	1.17 ± 0.44	0.92 ± 1.24
% D	1.16 ± 0.42	0.78 ± 0.55
Outliers	0	0

Conclusion

The % CV and % D for the Axygen automation TT-200-CBK-HTR tips dispensing 20 µL and 200 µL were 5% or below. Therefore, Axygen automation TT-200-CBK-HTR tips can precisely and accurately dispense volumes as low as 20 µL and as high as 200 µL for aqueous solution using the LiHa on the Tecan Freedom EVO liquid handling workstation.



www.corning.com/lifesciences/solutions

In our continuous efforts to improve efficiencies and develop new tools and technologies for life science researchers, we have scientists working in Corning R&D labs doing what you do every day, across the globe. From collection to analysis, our technical experts understand your challenges and your need for simplified efficient, low- to high-throughput genomics processes.

A combination of global manufacturing expertise, extensive use of in-house automation, an unsurpassed commitment to product innovation and a thorough understanding of your processes enables Corning to offer a beginning-to-end portfolio of high-quality, reliable consumables and reagents for genomics applications.

For more specific information on claims, visit the Certificates page at www.corning.com/lifesciences.

Warranty/Disclaimer: Unless otherwise specified, all products are for research use only. Not intended for use in diagnostic or therapeutic procedures. Not for use in humans. Corning Life Sciences makes no claims regarding the performance of these products for clinical or diagnostic applications.

For additional product or technical information, visit www.corning.com/lifesciences or call 800.492.1110. Outside the United States, call +1.978.442.2200 or contact your local Corning sales office.

Corning Incorporated
Life Sciences

836 North St.
Building 300, Suite 3401
Tewksbury, MA 01876
t 800.492.1110
t 978.442.2200
f 978.442.2476

www.corning.com/lifesciences

CORNING | **FALCON** | **AXYGEN** | **GOSSSELIN** | **PYREX**

For a listing of trademarks, visit www.corning.com/clstrademarks.
All other trademarks are the property of their respective owners.