



SHAREABLE PDF

# Head-to-head comparison of SARS-CoV-2 antigen-detecting rapid test with professional-collected nasal *versus* nasopharyngeal swab

Andreas K. Lindner<sup>1,11</sup>, Olga Nikolai<sup>1,11</sup>, Chiara Rohardt<sup>1</sup>, Susen Burock<sup>2</sup>, Claudia Hülso<sup>1</sup>, Alisa Bölke<sup>1</sup>, Maximilian Gertler<sup>1</sup>, Lisa J. Krüger<sup>3</sup>, Mary Gaedert<sup>3</sup>, Frank Tobian<sup>3</sup>, Federica Lainati<sup>3</sup>, Joachim Seybold<sup>4</sup>, Terry C. Jones<sup>5,6,7</sup>, Jörg Hofmann<sup>8</sup>, Jilian A. Sacks<sup>9</sup>, Frank P. Mockenhaupt<sup>1,12</sup> and Claudia M. Denking<sup>3,10,12</sup>

**Affiliations:** <sup>1</sup>Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Institute of Tropical Medicine and International Health, Berlin, Germany. <sup>2</sup>Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Charité Comprehensive Cancer Center, Berlin, Germany. <sup>3</sup>Division of Clinical Tropical Medicine, Center of Infectious Diseases, Heidelberg University Hospital, Heidelberg, Germany. <sup>4</sup>Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Medical Directorate, Berlin, Germany. <sup>5</sup>Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health, Institute of Virology, Berlin, Germany. <sup>6</sup>German Centre for Infection Research (DZIF), partner site Charité, Berlin, Germany. <sup>7</sup>Centre for Pathogen Evolution, Dept of Zoology, University of Cambridge, Cambridge, UK. <sup>8</sup>Labor Berlin – Charité Vivantes GmbH, Berlin, Germany. <sup>9</sup>Foundation for Innovative New Diagnostics, Geneva, Switzerland. <sup>10</sup>German Centre for Infection Research (DZIF), partner site Heidelberg, Heidelberg, Germany. <sup>11</sup>Authors contributed equally. <sup>12</sup>Authors contributed equally.

**Correspondence:** Claudia M. Denking, Division of Clinical Tropical Medicine, Heidelberg University Hospital, Im Neuenheimer Feld 672, 69120 Heidelberg, Germany. E-mail: claudia.denking@uni-heidelberg.de



@ERSpublications

**Professional nasal sampling is a reliable alternative to nasopharyngeal sampling when using a WHO-listed SARS-CoV-2 antigen-detecting rapid test. This less invasive method needs less training to facilitate rapid scaling of testing strategies.** <https://bit.ly/3pEVIUL>

**Cite this article as:** Lindner AK, Nikolai O, Rohardt C, *et al.* Head-to-head comparison of SARS-CoV-2 antigen-detecting rapid test with professional-collected nasal *versus* nasopharyngeal swab. *Eur Respir J* 2021; 57: 2004430 [https://doi.org/10.1183/13993003.04430-2020].

This single-page version can be shared freely online.

## To the Editor:

Antigen-detecting rapid diagnostic tests (Ag-RDTs) are likely to play a substantial role in innovative testing strategies for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [1, 2]. Currently, most Ag-RDTs require nasopharyngeal (NP) sampling performed by qualified healthcare professionals. Nasal sampling would enable scaling of antigen testing strategies. The term nasal sampling is often not used uniformly, but can be differentiated as either anterior nasal sampling (entire absorbent tip of the swab, usually 1 to 1.5 cm, inserted into nostril), and nasal mid-turbinate (as described below) [3].