

# TERA Overview

## Trailblazing Terahertz Commercialization



### WHAT IS TERA?

TERA is a science-based, deep technology company fueled by cutting-edge engineering, providing technological enhancements in a variety of industries such as food, medical, pharma, and energy. For nearly two decades, TERA has researched and developed its exceptional Terahertz (THz) technology and is now ready to release its platform to the world, offering unparalleled advancements unavailable until today.

### THZ WAVES TECHNOLOGY

THz are human-safe, highly desirable waves with exceptional sensing capabilities. Located between microwaves and infrared waves on the electromagnetic (EM) spectrum, THz frequencies (0.3-3THz i.e., 300-3,000GHz) introduce a revolutionary approach to detecting biological and chemical materials and gases such as Volatile Organic Compounds (VOCs) and viruses found within breath.

Until recently, THz sources were improperly utilized for diverse commercial applications. Now, by customizing its deep technology to personalized industry needs, TERA is the first of its kind to overcome the industry's current challenges with ingenious applications and solutions alongside its strategic, industrial partners.

### AT A GLANCE

Founded: 2003

Headquarters: Herzliya, Israel

Origin: Weizmann Institute of Science

Employees: ~75 FTE\*

Total Patent Applications: 90\*\*

Total Investments: +\$115M

Total Investors: 400+

Intro Video on TERA: [Link](#)

ISO Certified: 9001, 13458

\* Excluding ~20 outsourced employees/advisors

\*\* 49 Granted; 41 in process; and ~100 additional applications in various stages

Tailored Technology for Specific Industry Challenges

Human-Safe (Non-Ionizing Waves)

Unique Detection of Gases and Bio-Chemical Compounds

Hydrogen Bond & Water Molecule (H<sub>2</sub>O) Modification

Molecular Radar Capabilities

Bio-Availability Enhancements in Food & Pharma Industries

### OUR PRODUCTS

**TeraSystem**® – A THz spectrometer operating as a molecular radar/scanner and platform, customizable for products and solutions. The TeraSystem detects and obtains the biological fingerprint of any gas or organic material within its proximity.

**TeraWaterSystem**® – A specialized machinery producing TeraWater with unique characteristics. The TeraWaterSystem forces water to undergo a unique illumination process, enhancing its bioavailability.



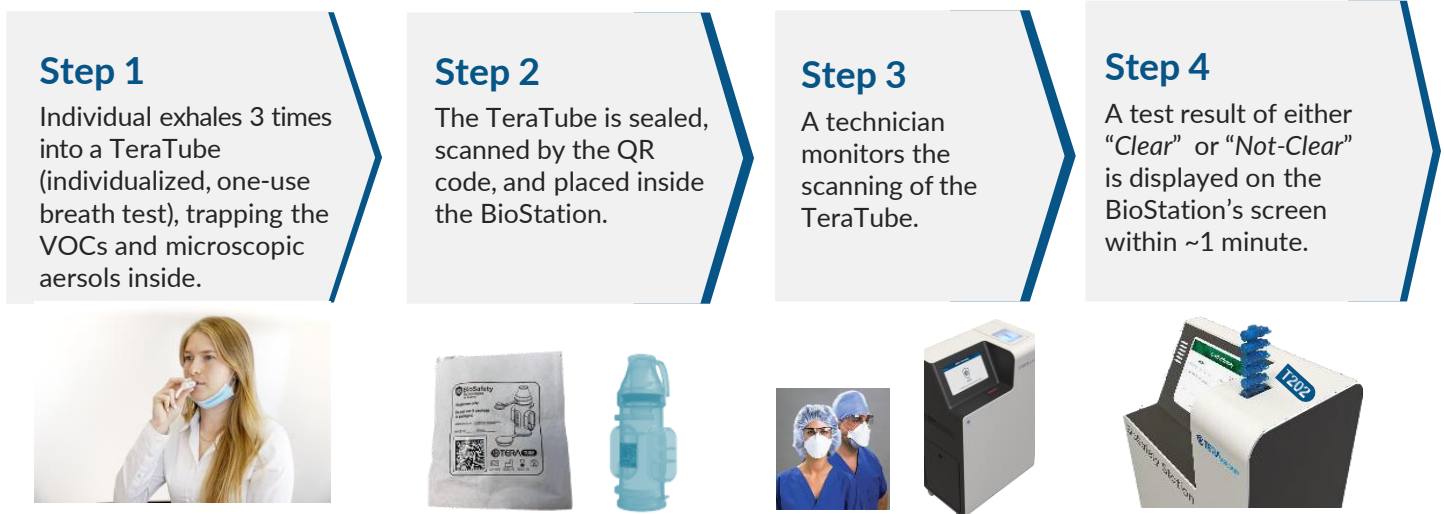
TERA, via its fully owned subsidiary, Tera.Bio, has launched a rapid, non-invasive COVID-19 test using the sensitivity of THz to confirm if a subject is or is not free of COVID-19 and its variants. Using a clearance classifier, Tera.Bio assigns a status of “Clear” or “Not Clear” to the individual tested, based on his/her results. Compromised of the proprietary TeraSystem molecular scanner, this rapid test provides accurate and reliable results by capturing VOC particles and other microscopic aerosols found in every breath we exhale.

TERA has begun selling its rapid breath tests to clients globally and will continue to apply for and receive regulatory approvals from countries worldwide.

## INTENDED USE

Tera.Bio’s rapid and high throughput breath screening tests are intended to clear asymptomatic or pre-symptomatic individuals that are negative to COVID-19, complementary to RT-PCR tests. In the future, Tera.Bio intends to provide pandemic alerts for other potential viruses to the general public for international travel, concerts, office buildings, and more.

## HOW DOES IT WORK?



## BENEFITS

Real-Time Results	Software Updates for Other Viruses, Disease & Variants (Coming Soon)	Easy to Operate
Non-Invasive	Machine Learning/AI/DSP	Portable

## TERA.BIO APP (iOS/Android)

The Tera.Bio mobile app provides push notifications with test results and general information of nearby test locations.



Assuming a Biostation operates for 14 hrs a day, 7 days a week, with a downtime of 20%, the machinery will operate about 98 hours weekly. If the working time is more or less than 14 hours a day, the Biostation’s total number of hours may vary.

# TERA.Bio Rapid Breath Test Vs. Current COVID-19 Testing Solutions



## WHY TERA.BIO?

TERA believes the only way to prevent a pandemic is by breaking the chain of transmission as early as possible in addition to vaccinations, masks, and pill treatments. The most effective method of prevention is performing early screening testing for the general population. TERA.Bio detects and screens SARS-COV-2 at a low-cost with accuracy, efficiency, and speed.

	TERA.Bio	Antigen	RT-PCR
<b>Methodology</b>	Express, mass screening of breath aerosols and VOCs	Rapid screening for detecting fragments of the virus <sup>1</sup>	Molecular technology testing COVID-19's RNA <sup>3</sup>
<b>Technology</b>	Spike Protein THz detection, includes adjustments and updates for variants	Viral Agents, requires re-adjustment for variants	RNA, requires re-adjustment for variants
<b>Result Time</b>	~ 1 minute	~ 15 minutes	6 - 72 hours
<b>Detection Period</b>	Day 1 of infectiousness with or without symptoms	Day 1 of symptoms and if without symptoms, Day 3-5	Best detected during Day 4 - 7 of infection
<b>Price</b>	\$4.40 per test	~\$5-\$25 per test	~\$50-100 per test
<b>Accuracy</b>	High sensitivity, detection of asymptomatic & presymptomatic	May need confirmatory testing <sup>2</sup> , low sensitivity for asymptomatic	Moderate-to-high sensitivity
<b>Invasiveness</b>	Non-invasive; blow into tube, increased comfortability	Moderately invasive; nasal pharyngeal swab or nasal swab	Most invasive; nasal pharyngeal swab, often with discomfort

<https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html><sup>1</sup>

<https://www.cdc.gov/mmwr/volumes/70/wr/mm7019a3.htm#:~:text=Among%201%2C732%20paired%20samples%20from,%25%20and%2098.7%25%2C%20respectively><sup>2</sup>

<https://my.clevelandclinic.org/health/diagnostics/21462-covid-19-and-pcr-testing><sup>3</sup>