



Health Technology Review	
Technology Ref:	HTA21003
Technology Name:	Terahertz Express Analyzer Sensing Platform (ThEA)
Approvals by International Bodies:	No approvals found
Company name:	Al Raisi for Repres. of Companies
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<b>Short Description of the Technology:</b>	ThEA is a point of care terahertz express analyser sensing technology with next generation sensors used to detect any viruses including COVID-19 in less than 2 minutes. This technology uses terahertz frequencies of proteins produced by viruses. When deployed at scale, the highly-portable ThEA Platform and test kits can be used to rapidly screen people during a viral outbreak – quickly differentiating between patients who need to be treated and persons who are safe to go about their day.
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<b>Health Technology Assessment Team Recommendation:</b>	<b>Recommendation is limited for validated</b>
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**Summary of Review:**

ThEA detects viruses based on unique energy that released from viruses' protein, DNA, RNA (Hertz, Kilohertz, terahertz) frequencies. It is very new technology and is not been used yet internationally, although there is a study done to detect Zika virus using terahertz signals.

Advantages	Disadvantages
Contactless, portable, completely digital, and user-friendly.	No international approvals found.
High sensitivity rate that can detect a viral infection even when there's as few as 10 viral particles in a sample. High Sensitivity Range based on 3rd Party Study (at = or < CT36).	Using a cloud-connected database to automatically backup data which can be shared by healthcare providers, agencies, local, state, and federal authorities.
The platform very sensitive and it can define between different strains of the same virus.	No studies show the effectiveness, the safety and the risks of the technology.
Digital process which is requires no labs, no chemicals, and gives no chance for transport or environmental factors to affect the process (point of care).	No price/cost was found as it should be requested directly from the company.
Detect the viruses within 24h of exposure.	Not clear if Terahertz requires to be used in specific designed area.
Obtain the test result within 2 minutes.	
The platform can be used thousands of times to diagnose any number of pathogens, including	

COVID-19 coronavirus

We recommend an **approval of using this technology under validation** with the following conditions:

1. Establishing a proper quality monitoring process and reporting of any adverse events or unwarranted consequences including safety issues of employees
2. Use of the product is initially limited under the supervision of SEHA for validation purpose until the final approval is given
3. Provision of regular updates and reports about the product to DOH upon request.
4. Any other documents or information requested regarding the product to finalize the approval process.
5. The final approval for using the technology will be under the decision of Abu Dhabi Public Health Center.

**Moreover**, DOH has the right to stop the product at any stage if deemed necessary, initial conditions and any subsequent conditions must be satisfied before obtaining final approval. Failure to do so will reflect in provoking the approval.

Technology Image

