



# BCSIR Laboratories Dhaka, BCSIR

**Name** **BCSIR-COVID Kit for COVID-19 Detection**

**Area** Biological samples

**Uses** Detection of SARS-CoV-2 virus



BCSIR-COVID Kit is a SARS-CoV-2 virus detection kit and is a first to target the M gene (mutation rate is low). The primer and probe used in this kit has been designed by scientists of BCSIR, making it different and unique from commercial available kits. The specificity, sensitivity and accuracy of this developed kit is comparable to Gold Standard kit and is better than commercial kits. The limit of detection of the developed kit is 100 copies of virus/ml, which is quite low than other kits and so it allows detection at an early stage of SARS-CoV-2 infection. This kit can also detect all variants (Alpha, Beta, Gamma, Delta, Omicron, etc.) of SARS-CoV-2 virus. Lastly, using glycogen during RNA extraction method has led to reduction in cost of COVID-19 testing.

**Scale of Development** -

**Major Raw Material** Primer-probe, PCR Master Mix, Nuclease-Free water

**Major Plant Equipment/Machinery** PCR machine, centrifuge machine, spinner.

**Details of specific application** Detection of SARS-CoV-2 from nasopharyngeal or oropharyngeal swabs

**Status of Development** This process is accepted by the DGDA and approved for production

**Ecological/Environmental Impact (if any, specify briefly)** This process is environmentally friendly and after commercialization this product is able to fulfill our national demand

**Patenting details** Patented filed

**Commercialization Status** -

**Techno-Economics** Available on demand

**Cost of Production (Tk.)** 250.00 Tk/Kit

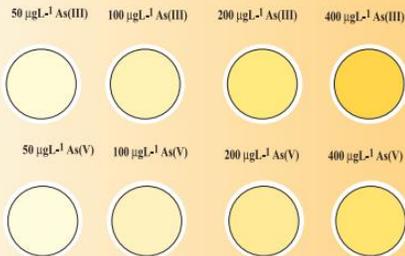
**Keywords** BCSIR-COVID Kit, SARS-CoV-2 virus, nasopharyngeal s



# BCSIR Laboratories Dhaka, BCSIR

<b>Name</b>	<b>In-situ Arsenic detection kit for Aqueous medium</b>
Area	water (Environmental Sciences)
Uses	Arsenic detection in water  In 1993, the Department of Public Health Engineering (DPHE), Bangladesh detected four tube wells in Chamargram village of Nawabganj district that yielded arsenic-contaminated groundwater and eight arsenicosis patents. Arsenic is 4 times more toxic than mercury & its fatal dose is 125 mg. The arsenic permissible limit is 50 µg/L in Bangladesh, and worldwide 10 µg/L. According to the Multiple Indicator Cluster surveys (2012), 19 million (12%) people in Bangladesh are at very high risk of Arsenic.
Scale of Development	This process is ready for lease out
Major Raw Material	Mercury bromide, Zn powder, L ascorbic acid
Major Plant Equipment/Machinery	A grinding machine, mixing machine, S.S. still container, oxygen-free reactor/ vacuum conditioning
Details of specific application	Arsenic-prone areas where the drinking water was tested by using this kit,
Status of Development	This process is accepted by the BCSIR authority and ready to lease out
Ecological/Environmental Impact (if any, specify briefly)	This process is environmentally friendly and after commercialization this product able to fulfill our national demand
Patenting details	Patented filed
Commercialization Status	This process is leased out by BCSIR authority
Techno-Economics	Available on demand
Cost of Production (Tk.)	50.00 Tk/Kit
Keywords	Arsenic polluted water, kit, environment, permissible limit.

## Arsenic (As) Detection Kit- A product of BCSIR Laboratories, Dhaka



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In 1993, Department of Public Health Engineering (DPHE), Bangladesh detected four tubewells in Chamagram village of Nawabganj district that yielded arsenic-contaminated ground-water and eight arsenicosis patients

- ⇒ Arsenic is 4 time toxic than mercury & its fatal dose 125 mg
- ⇒ Arsenic permissible limit 50 µg/L in Bangladesh ,world-wide 10 µg/L
- ⇒ According to Multiple Indicator Cluster survey (2012), 19 million (12%) people in Bangladesh are very high risk in Arsenic
- ⇒ A few million dollar is expenditure for purchasing As detection kit



Name of the Technology:  
**In-situ As Detection Kit for Aqueous Medium**

### Salient Features

- ❖ Cost effective    ❖ Easy to use
- ❖ Accuracy high    ❖ In situ analysis
- ❖ Very low cost

### Raw Material

- ❖ Locally available raw material
- ❖ Chemical based as prepared kit
- ❖ Reagent A: 1 spoon solid Acids
- ❖ Reagent B: 2 spoon metallic dust

### Research Personnel Contact:

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