



## CSIR-Indian Institute of Toxicology Research (CSIR-IITR)

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### CSIR-IITR BH/P-50 requirements for FY 2025-26 (As of April 25, 2025)

#### (1) Division: REACT

| Sl. No. | Equipment                                                               | Tentative budget (Lakhs) |
|---------|-------------------------------------------------------------------------|--------------------------|
| 1.      | Digital lux meter                                                       | 0.2                      |
| 2.      | Sound level meter                                                       | 0.2                      |
| 3.      | Digital programmable electronic timer                                   | 0.2                      |
| 4.      | Microwave oven                                                          | 0.25                     |
| 5.      | Temperature humidity data recorder                                      | 0.3                      |
| 6.      | Horizontal deep freezer (-20)                                           | 0.4                      |
| 7.      | Incubator                                                               | 0.45                     |
| 8.      | Magnetic stirrer with heating                                           | 0.5                      |
| 9.      | Water bath (cell culture)                                               | 0.5                      |
| 10.     | Vortex mixer                                                            | 0.6                      |
| 11.     | Fridge (cell culture)                                                   | 0.6                      |
| 12.     | Mini centrifuge                                                         | 0.66                     |
| 13.     | Vortex with head                                                        | 0.8                      |
| 14.     | Hot water pressure jet machine                                          | 1.0                      |
| 15.     | RO system, 50 L/hr capacity at CRK Campus (2 Nos.)                      | 1.0                      |
| 16.     | -20 degree deep freezer                                                 | 1.0                      |
| 17.     | ELISA plate washer                                                      | 2.7                      |
| 18.     | Magnetic stirrer (Multiplate)                                           | 3.0                      |
| 19.     | Centrifuge                                                              | 3.0                      |
| 20.     | iSPAWN-S                                                                | 3.75                     |
| 21.     | Weighing balance (5-digit Precise weighing)                             | 4.0                      |
| 22.     | Autoclave                                                               | 5.5                      |
| 23.     | Inverted microscope                                                     | 7.0                      |
| 24.     | CO <sub>2</sub> euthanasia system                                       | 8.0                      |
| 25.     | Cooling incubator (2 Nos.)                                              | 11.8                     |
| 26.     | Tissue homogenizer                                                      | 11.8                     |
| 27.     | Compound upright microscope with image analyzer                         | 15.0                     |
| 28.     | Fully automatic Cryostat microtome                                      | 20.0                     |
| 29.     | Microinjection system (microinjector, micromanipulator, pipette puller) | 22.0                     |
| 30.     | Advanced imaging system for western blot                                | 24.0                     |
| 31.     | Real Time PCR (Not finalized in 2023-24)                                | 24.0                     |
| 32.     | Histology Grossing Station (From 2023 List – Re-tender)                 | 30.0                     |
| 33.     | Fluorescence spectrophotometer                                          | 30.0                     |
| 34.     | Laboratory water purification system (pure and ultra-pure water)        | 36.0                     |

|     |                                                           |               |
|-----|-----------------------------------------------------------|---------------|
| 35. | Cigarette smoke exposure system - in-vitro and whole-body | 40.0          |
| 36. | CASA (Computer-assisted semen analyzer)                   | 50.0          |
|     |                                                           | <b>360.21</b> |

**(2) Division: ASSIST**

| Sl. No. | Equipment                                                 | Tentative budget (Lakhs) |
|---------|-----------------------------------------------------------|--------------------------|
| 37.     | Grinding mill                                             | 0.25                     |
| 38.     | Sonicator bath                                            | 0.50                     |
| 39.     | UV inspection cabinet                                     | 0.3                      |
| 40.     | Microwave oven,                                           | 0.3                      |
| 41.     | Ultra Sonicator (3-4 L)                                   | 0.4                      |
| 42.     | Manual bottle sealing machine with foil                   | 0.5                      |
| 43.     | Vortex (Multitube position) (02 nos)                      | 0.5                      |
| 44.     | Ultraviolet Viewing Cabinet with lamps                    | 0.5                      |
| 45.     | pH meter                                                  | 0.5                      |
| 46.     | Laboratory shower and Eye washer with a suitable pump     | 0.6                      |
| 47.     | Sonicator                                                 | 0.6                      |
| 48.     | Wireless Temperature and Humidity Sensors (2 pcs)         | 0.6                      |
| 49.     | Dehumidifier                                              | 0.7                      |
| 50.     | Hydrothermal autoclave reactor                            | 0.7                      |
| 51.     | -20 Refrigerator                                          | 0.75                     |
| 52.     | Mini Vortex (2)                                           | 0.8                      |
| 53.     | Sonicator                                                 | 1                        |
| 54.     | Refrigerator (-20° C)                                     | 1                        |
| 55.     | Conductivity meter                                        | 1                        |
| 56.     | Dry Bath                                                  | 1                        |
| 57.     | -20°C Double-door refrigerator                            | 1.25                     |
| 58.     | Autoclave                                                 | 1.5                      |
| 59.     | UV chamber and red, green, and blue emitting light source | 1.5                      |
| 60.     | pH Meter (02 nos)                                         | 1.75                     |
| 61.     | Incubator                                                 | 2                        |
| 62.     | Centrifuge                                                | 2                        |
| 63.     | Centrifuge                                                | 2                        |
| 64.     | Hot air Oven                                              | 2.5                      |
| 65.     | Muffle furnace                                            | 2.5                      |
| 66.     | Balance (one five digits and one four-digit)              | 3                        |
| 67.     | Fume hood                                                 | 3                        |
| 68.     | Solid phase extraction (SPE) vacuum manifold              | 3                        |
| 69.     | Thermomixer                                               | 3                        |
| 70.     | Moisture analyser                                         | 3.5                      |
| 71.     | Moisture analyser                                         | 3.5                      |
| 72.     | Multi-position magnetic hot plate stirrer (02 nos)        | 4                        |
| 73.     | BOD Incubator                                             | 4                        |
| 74.     | PCR Thermocycler                                          | 4                        |
| 75.     | Laminar Flow Cabinet                                      | 4.5                      |
| 76.     | Hot air oven                                              | 4.5                      |

| Sl. No. | Equipment                                                                           | Tentative budget (Lakhs) |
|---------|-------------------------------------------------------------------------------------|--------------------------|
| 77.     | Milli-Q water purification system                                                   | 5                        |
| 78.     | Glutomatic system with kneader and gluten dryer                                     | 5                        |
| 79.     | Centrifuge, operating at 6000 $\pm$ 5 rpm and equipped with gluten index cassettes  | 5                        |
| 80.     | Acid Digestion Fume Hood with installation                                          | 5                        |
| 81.     | CO & CO <sub>2</sub> real-time monitoring instrument                                | 5                        |
| 82.     | Automatic digital Vacuum Desiccator (2 nos)                                         | 5                        |
| 83.     | Microscope                                                                          | 5                        |
| 84.     | Fume hood                                                                           | 5                        |
| 85.     | Ampule sealing machine with gas                                                     | 5                        |
| 86.     | Muffle Furnace                                                                      | 6                        |
| 87.     | Rotary Vacuum Concentrator                                                          | 7.5                      |
| 88.     | Incubator shaker                                                                    | 8.0                      |
| 89.     | Nanodrop Spectrophotometer                                                          | 10                       |
| 90.     | -80°C Refrigerator                                                                  | 10                       |
| 91.     | Liquid nitrogen tank                                                                | 10.0                     |
| 92.     | -80 deep freezer                                                                    | 10.0                     |
| 93.     | Dual-beam spectrophotometer                                                         | 15.0                     |
| 94.     | Vacuum Rotary Evaporator with chiller                                               | 15.0                     |
| 95.     | Bomb Calorimeter                                                                    | 15.0                     |
| 96.     | 20L rotary evaporator with chiller and pump                                         | 20.0                     |
| 97.     | Glassware washer                                                                    | 20.0                     |
| 98.     | Steam sterilizers (Autoclave)                                                       | 20.0                     |
| 99.     | Multimode Plate Reader (preferentially 4 channel)                                   | 20.0                     |
| 100.    | Sample homogenizer and sampler                                                      | 25.0                     |
| 101.    | Type II water preparation unit with 40 L storage capacity                           | 25.0                     |
| 102.    | Gel doc                                                                             | 25.0                     |
| 103.    | Gas chromatograph with ECD and FID detector                                         | 30.0                     |
| 104.    | Fluorescent Microscope (with multicolour Imaging attachments and analysis software) | 30.0                     |
| 105.    | Vector network analyzer                                                             | 32.0                     |
| 106.    | Steam sterilizers (Autoclave)                                                       | 40.0                     |
| 107.    | FTIR with ATR and transmission mode                                                 | 45.0                     |
| 108.    | Fluorescence Spectrophotometer                                                      | 50.0                     |
|         |                                                                                     | <b>603.0</b>             |

**(3) Division: FEST**

| Sl. No. | Equipment                                           | Tentative budget (Lakhs) |
|---------|-----------------------------------------------------|--------------------------|
| 109.    | Waterbath shaker                                    | 0.25                     |
| 110.    | Waterbath sonicator                                 | 0.45                     |
| 111.    | Magnetic stirrer with hot plate (for 2-5L capacity) | 0.5                      |
| 112.    | Online UPS system-3KVA capacity                     | 0.5                      |
| 113.    | Semi-Dry Unit                                       | 1.0                      |
| 114.    | Gel electrophoresis equipment with accessories      | <b>2.5</b>               |

| Sl. No. | Equipment                                                    | Tentative budget (Lakhs) |
|---------|--------------------------------------------------------------|--------------------------|
| 115.    | Deep Freezer (-20C)                                          | 1.5                      |
| 116.    | T-Maze                                                       | 1.5                      |
| 117.    | Open Field Test                                              | 1.5                      |
| 118.    | Elevated Plus Maze (Anxiety like behaviour)                  | 2.0                      |
| 119.    | Deep freezer (-20°C)                                         | 2.0                      |
| 120.    | Polymerase chain reaction machine                            | 4.0                      |
| 121.    | Novel Objects Recognition Instrument                         | 2.5                      |
| 122.    | Automated Rotarod                                            | 3.0                      |
| 123.    | Analytical Balance                                           | 3.0                      |
| 124.    | Biosafety cabinet [medium sized]                             | 3.0                      |
| 125.    | Grip Strength Meter                                          | 3.5                      |
| 126.    | Gel system Vertical Mini gel System with accessories         | 3.5                      |
| 127.    | Semi-dry electroblotting System with compatible power supply | 4.0                      |
| 128.    | Western blotting unit                                        | 4.5                      |
| 129.    | Automated Y-maze Animal Behaviour System                     | 5.0                      |
| 130.    | Laminar Flow Cabinet                                         | 5.0                      |
| 131.    | Ice flaking machine                                          | 6.0                      |
| 132.    | Liquid Nitrogen Tank with accessories                        | 6.0                      |
| 133.    | Biosafety cabinet                                            | 6.0                      |
| 134.    | Sonicator                                                    | 6.0                      |
| 135.    | Portable (Field) Multi-parameter Water quality Meter         | 6.0                      |
| 136.    | Ultra Sonicator                                              | 6.0                      |
| 137.    | Shaker Incubator                                             | 6.5                      |
| 138.    | Bio-safety Level 2                                           | 7.0                      |
| 139.    | Fluorimeter                                                  | 7.0                      |
| 140.    | CO2 Incubator                                                | 7.0                      |
| 141.    | BOD incubator                                                | 7.0                      |
| 142.    | Portable hand-held sensing platform with accessories         | 7.0                      |
| 143.    | CO2 Incubator                                                | 8.0                      |
| 144.    | Centrifuge (for microcentrifuge tubes)                       | 8.0                      |
| 145.    | Centrifuge refrigerated                                      | 10.0                     |
| 146.    | Electroporator                                               | 10.0                     |
| 147.    | Deep freezer (-80° C)                                        | 10.0                     |
| 148.    | High-end Server workstation                                  | 20.0                     |
| 149.    | Chemidoc system (Central Facility)                           | 25.0                     |
| 150.    | Cryomicrotome                                                | 30.0                     |
|         |                                                              | <b>253.2</b>             |

**Grand total: Rs. 1216.5 lakhs**

**(4) Facility Creation Equipment**

| Sl. No. | Equipment                               | Tentative budget (Lakhs) |
|---------|-----------------------------------------|--------------------------|
| 1       | 120 KV Transmission Electron Microscope | 450.0                    |