



**DEPARTMENT OF BIOTECHNOLOGY**  
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Dr. D. KARUNAGARAN

Professor and Head

Date: 24.06.2016

Ref: BT/KSUB/2016/005/SPL

Dt. 24.06.16

Due Dt.11.07.16

1. Quotations are invited in duplicate for the various items shown below/overleaf/ enclosed list.
2. The quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS & D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price. If so, please send copy of the R.C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for should be submitted free of charges and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute. If quotations are for Ex-Godown, delivery charges should be indicated separately.
7. **Firms outside Chennai:** Quotations should be for F.O.R Chennai. If F.O.R. Consigner stationer freight charges by passenger train/lorry transport must be indicated. If Ex-Godown, Packing, forwarding and freight charges must be indicated.
8. The rates of Sales/General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales/General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have concessional sales tax applicable to non-government educational institutions run with no profit motive for which a Concession. Sales tax certificates will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill/acceptance of goods, whichever is later.

## **Equipment Name: Micromanipulator System + Needle Puller**

### **Required specifications:**

#### **Needle puller:**

1. Pulling should be vertical, using gravitational force.
2. Should have both single-pull and two-stage pull options.
3. Should have two heater adjustment options for separately controlling the temperature for the two stages.
4. The weights for the gravitational force should be adjustable.
5. Should accommodate 1-mm glass capillaries.
6. Power supply: 220-240 volts, 50 Hertz

#### **Micromanipulator:**

This will consist of a) coarse manipulator, b) fine manipulator and adaptors to an existing Nikon inverted microscope model Ti-S.

1. The fine manipulator and the coarse manipulator should be compatible with each other.
2. The fine manipulator should be either oil-hydraulic with ergonomically-designed controls, or electronically-controlled with one-touch position-resetting feature.
3. Movement range should at least be: 10mm on each of the X, Y and Z axes.
4. The joystick of the fine manipulator should allow adjustment on all three axes.
5. The coarse manipulator should allow three-way adjustment with an additional rotation mechanism.
6. Movement range for the coarse manipulator: 20mm on all three axes.

#### **Adaptors:**

1. Include necessary adaptors, joints, etc. for easy assembly of the above manipulators on an inverted microscope model Nikon Ti-S.

*Warranty:* A minimum of two-year warranty on all parts.

*Quantity:* One set

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