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## Technical Specifications For Lab scale Multichannel Microreactor System for Nanoparticles Synthesis

**Description:** A multichannel microreactor system is a miniaturized device designed for the synthesis of nanoparticles. It offers several advantages over conventional batch reactors, including:

Enhanced control over reaction parameters, Continuous production, Scalability, and Safety.

A typical multichannel microreactor system for nanoparticle synthesis consists of the following components:

**Microchannels:** These are the tiny channels where the reaction takes place. The channels are typically made of silicon or glass and have dimensions of tens to hundreds of micrometers.

**Mixing units:** These units are used to combine different precursor solutions and reaction media. Different types of mixing units can be employed, such as T-mixers or staggered herringbone mixers.

**Heating/cooling units:** These units are used to control the reaction temperature. This can be achieved by incorporating heaters or coolers into the microreactor chip.

**Collection unit:** The nanoparticles produced in the reaction are collected at the end of the microchannels.

Sr. No.	Description	Quantity
1	<b>Multichannel Microreactor</b> <b>1. Y-Junction</b> <b>2. Y+3 Joint Junction</b>	1-Unit
2	<b>Temperature sensor and controller system</b>	1-Unit
3	<b>Oil (Heating Media)</b>	10 L
4	<b>Microreactor Outer body</b> (SS/Acrylic)	1-Unit
5	<b>Piping and Valves</b>	1-Lot
6	<b>Sering Pump</b>	1
7	<b>Stand/Cabinet for multichannel Microreactor</b>	1-Unit





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**Note\*:** Customized dimensions based setup is available

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