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Autonomous Lab-on-a-chip (LOC)

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Autonomous Lab-on-a-chip (LOC) devices integrate and concentrate, in a small volume, microfluidic preparation, calibration and readout procedures otherwise performed at standard laboratories. LOC fabrication procedures usually requires specialized equipment and facilities.

Cell phones are the most widely used computer-capable sensors-integrated devices, and could analyze liquid samples if coupled with a LOC device.

This study shows solutions for Autonomous-LOC development, including the use of low-cost 3D printers as fast LOC prototyping platforms and phone-LOC coupling for optic readout without accessories beyond the LOC.

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