

# ABX<sub>3</sub> Perovskite Halide Pure Powders

## Technical Data Sheet

|                                  |   |                    |
|----------------------------------|---|--------------------|
| <b>CsPbBr<sub>3</sub> powder</b> | <b>CsPbBr<sub>3</sub> Perovskite Powder</b> | <b>High purity</b> |
| <b>MAPbBr<sub>3</sub> powder</b> | <b>MAPbBr<sub>3</sub> Perovskite Powder</b> | <b>High purity</b> |
| <b>FAPbBr<sub>3</sub> powder</b> | <b>FAPbBr<sub>3</sub> Perovskite Powder</b> | <b>High purity</b> |
| <b>MAPbI<sub>3</sub> powder</b>  | <b>MAPbI<sub>3</sub> Perovskite Powder</b>  | <b>High purity</b> |

Lead halide perovskite (APbX<sub>3</sub>) materials have attracted considerable interest for optoelectronic applications due to high light absorption coefficients, long-range balanced electron and hole transport, and facile preparation techniques. QUANTUM SOLUTIONS is an expert in synthesis of high quality perovskite materials: Quantum Dots, Single Crystals and Powders. For powders preparation we use modified single crystal crystallization methods to prepare the highest purity powders as possible. Quality control is provided by XRD and elemental analysis.

### Application fields

Perovskite materials have been widely investigated for solar cells, lasing, light-emitting diodes, photodetectors. These powders can be used in various research projects where is the high purity APbX<sub>3</sub> phase is required. Also powders can be used as a precursors to make perovskite single crystals by inverse temperature crystallization. Additionally, all inorganic perovskite CsPbBr<sub>3</sub> powder can be used to make thin films by vacuum deposition techniques (PLD etc.) for photodetector or solar cell devices.

## Specification

| Catalog Number    | CsPbBr <sub>3</sub> powder | MAPbBr <sub>3</sub> powder  | FAPbBr <sub>3</sub> powder   | MAPbI <sub>3</sub> powder  |
|-------------------|----------------------------|---|--|--|
| <b>Type</b>       | CsPbBr <sub>3</sub>        | MAPbBr <sub>3</sub><br>(MA – CH <sub>3</sub> NH <sub>3</sub> <sup>+</sup> ) | FAPbBr <sub>3</sub><br>(FA - NH <sub>2</sub> CH=NH <sub>2</sub> <sup>+</sup> ) | MAPbI <sub>3</sub><br>(MA – CH <sub>3</sub> NH <sub>3</sub> <sup>+</sup> ) |
| <b>Purity</b>     | > 99 %                     | > 99 %  | > 99 %   | > 99 %   |
| <b>Appearance</b> | Orange powder              | Orange powder   | Orange powder  | Black powder   |

## Notes for handling

Shelf Life 1 year, except MAPbI<sub>3</sub> – 2-3 months. Storing temperature 2-25 °C. Store in DARK and DRY place, in original or airtight sealed packaging or in a glovebox under inert atmosphere. Avoid a long term contact with air.

## Packing

Glass vials 7-30 mL



### QUANTUM SOLUTIONS

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