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A Review on Quality Assurance and Quality Control in Pharmaceuticals

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Abstract: *This review highlights global approaches for assessing residual solvents, geotaxic impurities, and various organic and inorganic contaminants in pharmaceutical products. Regulatory bodies worldwide now require full disclosure of both purity and impurity profiles to ensure drug safety and therapeutic quality. These evaluations are vital for maintaining the safety, efficacy, and consistency of medicines. Impurities may arise from multiple sources, making their control essential to prevent substandard drugs that could harm patients. Quality assurance (QA) within the pharmaceutical supply chain guarantees that all medications supplied are safe, effective, and of the desired standard. A comprehensive QA program integrates both technical and administrative measures, while quality control (QC) ensures reproducibility, process validation, and monitoring of product complaints to reduce defective products*

Keywords: ISO, ICH, IPQC, FPQC, QbD, Validation, Calibration

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