

Risks reduced. Business enabled.





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International Pharmaceutical GMP Standards – some examples

- WHO GMP: Global guidelines for quality assurance in pharmaceutical manufacturing, applicable in over 100 countries.
- ICH Q7: Provides GMP guidelines for APIs (active pharmaceutical ingredients), harmonizing standards across regions.
- EU GMP: Regulated by the European Medicines Agency (EMA), ensuring compliance across EU member states.
- FDA cGMP: Enforced by the U.S. Food and Drug Administration, focusing on current Good Manufacturing Practices.
- ANVISA GMP: Brazil's regulatory authority, aligning with international standards and requiring GMP certification for manufacturers.



Aspect	Action
Quality Assurance	Consistent production and control to meet quality standards.
Documentation & Traceability	Detailed documentation and records for traceability.
Personnel Training & Hygiene	Trained staff and strict hygiene practices.
Process Validation & Equipment Qualification	Ensures repeatability and reliability.
O Contamination Control	Preventive measures like cleanrooms and sanitation.
Supply Chain Qualification	Verified, compliant suppliers and sub-contractors.

Supply Chain GMP Compliance – 5 Steps





Supply Chain GMP Compliance 5 Steps

- 1. Selection;
- 2. Qualification;
- 3. Approval;
- 4. Monitoring;
- 5. Re-qualification.

EU-GMP Guidelines Chapter 5 (Production):

- 5.27 "The selection, qualification, approval and maintenance of suppliers of starting materials, together with their purchase and acceptance, should be documented as part of the pharmaceutical quality system..."
- 5.29 "Audits should be carried out at the manufacturers and distributors of active substances to confirm that they comply with the relevant good manufacturing practice and good distribution practice requirements. (...)
- 5.45 "The selection, qualification, approval and maintenance of suppliers of primary and printed packaging materials shall be accorded attention similar to that given to starting materials."



Aspect	Action
Company registration details	Verify the supplier's legal status through official registries and cross-check business information against regulatory databases.
Operating licenses and Quality and compliance certifications	Ensure the supplier holds valid licenses for pharmaceutical manufacturing or distribution, such as GMP or GDP certifications, and confirm these are up-to-date.
■ Management system in place	Evaluate the supplier's Quality Management System (QMS) for documented procedures on manufacturing, quality control, and regulatory compliance. Request completed supplier questionnaires or self-assessment reports.
(On-Site) Audit	Conduct a site visit to inspect facilities, observe operations, and verify compliance with GMP standards and internal procedures.

Supply Chain GMP Compliance – Qualification



Aspect	Action
⇒ Qualification Purpose	Assess whether the supplier meets the necessary requirements to provide the product or service according to pharmaceutical standards.
Risk-Based Approach	Tailor the depth and rigor of qualification activities based on the criticality of the product or service to patient safety and regulatory compliance.
Category Definition Based on Legislation	Classify suppliers using applicable regulations (e.g., EU GMP, ANVISA, FDA) to determine qualification scope and documentation needs.
Category Definition Based on Product/Service Destination	Define the qualification category considering whether the product is for clinical trials, commercial use, or internal R&D, as these have varying regulatory expectations.
Category Definition Based on GMP Impact	Evaluate how the product or service affects the GMP system (e.g., production, quality control, storage), and adjust qualification measures accordingly.

Supply Chain GMP Compliance – Approval



Aspect	Action
⇒ Approval Purpose	Verify the quality of the service provided and the product delivered by the supplier.
\$ Price	Is it competitive and in line with market standards?
Significant Changes in Supplier	E.g., change of address or ownership.
Delivery Quality	Timeliness, condition, and accuracy of delivered products.
Service Quality	Efficiency, professionalism, and responsiveness.
Documentation Quality	Completeness and traceability of all required records.
✓ Licenses & Certificates	Are they still valid and up to date?
Action Plan Compliance	Have previous evaluation recommendations been implemented?
Audits	Conduct audits when necessary for deeper assessment.

Supply Chain GMP Compliance – Monitoring



Aspect	Action
⇒ Monitoring Purpose	Assess whether the supplier maintains the necessary requirements to provide the product or service according to pharmaceutical standards.
Product Quality	Quality of items received at the warehouse.
Certificate of Analysis	Verification from the supplier for each batch.
Product Evaluation	Sampling and assessment before use.
Deviations	Any issues related to the product or service provided.
Repropriet Solving Efficiency	Supplier's responsiveness and action planning.
Execution of Action Plans	Ensuring proposed corrective actions are implemented.
Ö Delivery Time	Adherence to agreed delivery schedules.
Invoice vs. Order Match	Consistency between invoice and purchase order.
\$ Product Pricing	Is the supplier's pricing still competitive and reasonable?

Supply Chain GMP Compliance – Re-Qualification



Aspect	Action
Re-Qualification Purpose	Setting a regular schedule to re-qualify suppliers.
iii Defined Frequency	Establish how often re-evaluations will occur.
Qualification	Confirm suppliers still meet required standards.
Evaluation	Reassess performance based on set criteria.
Monitoring	Ensure ongoing compliance and improvement.
Continuous Improvement	Keeps the supplier management cycle active and effective.

Supply Chain GMP Compliance – Disqualification



Aspect	Action
⇒ Disqualification Purpose	Prevent the use of no longer qualified suppliers.
Based on Qualification Criteria	Discontinuation follows predefined rules.
O Disqualification = No Supply	A disqualified supplier cannot continue supplying.
Requalification Required	Full qualification process must be redone to resume supply.
CAPA Option	CAPA may be proposed during monitoring to correct issues and avoid disqualification.

Supply Chain GMP Compliance – Disqualification



- O Disqualified API Supplier: Anuh Pharma Ltd. (India)
- Incident: In March 2016, the French National Agency for Medicines and Health Products Safety (ANSM) conducted an inspection at Anuh Pharma Ltd., an Indian manufacturer of APIs.
- Findings: The inspection revealed 24 deficiencies, including:
 - Deliberate hiding of the origin of APIs (purchased externally and micronized at the site) by failing to disclose the original manufacturer, batch numbers, and Certificates of Analysis.
 - Processing of APIs from a facility known to be non-GMP compliant.
 - Serious GMP violations related to documentation, such as finding documents in a pile of rubble and lack of validation for blending and equipment cleaning.
 - Inadequate testing and documentation for recovered solvents.
 - Outcome: As a result of these violations, Anuh Pharma's GMP certificate was revoked, and Certificates of Suitability (CEPs) for four APIs were withdrawn or suspended.
- Implications: This action necessitated pharmaceutical companies to urgently verify whether any of their authorized medicinal products for the European market were produced by Anuh Pharma. If so, they were required to change the supplier and consider product recalls.

Supply Chain GMP Compliance – Qualification – Raw Materials







- Category & Specification: Clearly define material type and quality standards.
- Contaminant Testing: Screen for impurities like nitrosamines and elemental contaminants.
- Certificate of Analysis (CoA): Obtain and verify supplier-provided CoAs.
- Additional Testing: Conduct supplementary tests as needed to confirm compliance.
- Supplier Audits: Perform regular audits to ensure ongoing qualification.

Supply Chain GMP Compliance – Qualification – Packaging Materials



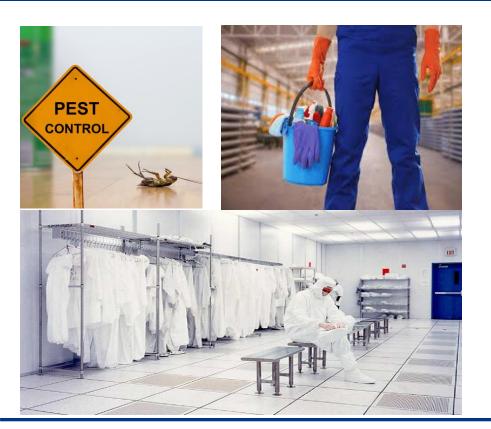


- Category & Specification: Clearly define material type and quality standards.
- Material Selection: Use high-quality, non-reactive materials compatible with the drug product.
- Certificate of Analysis (CoA): Obtain and verify supplier-provided CoAs.
- Audits: Perform regular audits to ensure ongoing qualification.

Supply Chain GMP Compliance – Qualification – Services







- Category & Specification: Clearly define service type and quality standards.
- Regulatory Alignment: Ensure services comply with relevant standards and regulatory requirements.
- Audits: Perform regular audits to ensure ongoing qualification.

Supply Chain GMP Compliance – Quality Agreements



Supply Chain GMP Compliance

Quality Agreements



Commercial Agreements

EU-GMP Guidelines Chapter 7 (Outsourced Activities):

- 7.14 A Contract should be drawn up between the Contract Giver and the Contract Acceptor which specifies their respective responsibilities and communication processes relating to the outsourced activities. (...)
 - 7.17 The Contract should permit the Contract Giver to audit outsourced activities, performed by the Contract Acceptor or his mutually agreed subcontractors

Supply Chain GMP Compliance – Quality Agreements



Aspect	Commercial Agreement	Quality Agreement
Purpose	Sale of goods or services, detailing commercial terms.	Quality standards and responsibilities, ensuring compliance with GMP.
Key Clauses	Terms on pricing, payment, delivery, and liability.	Focus on quality specifications, testing procedures, and compliance with regulatory standards.
Responsibilities	Obligations related to the transaction, such as delivery and payment.	Duties concerning quality, testing, and adherence to GMP standards.
Penalties	Breaches of contract terms, such as non-payment or late delivery.	May impose penalties for failing to meet quality standards or regulatory requirements.

Supply Chain GMP Compliance – QP Key Responsibilities





Supply Chain GMP Compliance

Qualified

Person (QP) -

Quality Resp

- EU-GMP Guidelines Annex 16 (Certification by a Qualified Person and Batch Release):
- The QP has responsibility for ensuring that:
- 1.7.2 The entire supply chain of the active substance and medicinal product up to the stage of certification is documented and available for the QP. This should include the manufacturing sites of the starting materials and packaging materials for the medicinal product and any other materials deemed critical through a risk assessment of the manufacturing process.
- 1.7.3 All audits of sites involved in the manufacture and the testing of the medicinal products and in the manufacture of the active substance have been carried out and that the audit reports are available to the QP performing the certification
- 4.1 Batches of medicinal products should only be released for sale or supply to the market after certification by a QP.

Supply Chain GMP Compliance – QP Key Responsibilities



Aspect	Action
Identify Regulatory Requirements	Determine applicable regulations based on material type and product category (e.g., human/veterinary drug or Investigational Medicinal Product).
Conduct Supplier Audits	Plan and execute audits to assess compliance with GMP and user specifications.
Evaluate Supplier Compliance	Assess the supplier's adherence to quality standards and regulatory requirements.
Monitor Supplier Performance	Implement ongoing evaluations to ensure continuous compliance and quality assurance.
Assess Changes at Supplier's Site	Evaluate any modifications in the supplier's processes or facilities that may impact compliance.

Supply Chain GMP Compliance – QP Key Responsibilities



- **QP** Responsibilities for Third-Party Audit Reports
- Final Assessment QP must evaluate and approve third-party audit reports.
- Written Summary A comprehensive summary of the evaluation should be documented by the QP.
- Audit Content Include verification of contractual arrangements, audit scope, auditor competence, audit frequency, and corrective actions.
- Conflict of Interest Assess and document any conflicts of interest identified.



- **Eurofins Healthcare Assurance** adopts a dedicated Quality System, Experienced & Qualified auditors, No conflict of interest, Code of Ethics, Shared Audits & Existing Audit reports
- https://h-aol.ai.eurofins.com/audits

Supply Chain GMP Compliance – Recap



- Q Prioritize Supplier Qualification: Conduct thorough assessments and audits of suppliers to ensure they meet GMP standards.
- Foster Strong Supplier Relationships: Establish clear contracts and regular audits to ensure adherence to GMP standards.
- Adopt a Risk-Based Approach: Identify and mitigate potential risks throughout the supply chain to proactively address compliance challenges.
- Maintain Robust Documentation: Ensure accurate and comprehensive records are kept for all manufacturing and distribution processes.