The FDA's Top Inspection Observations: What the Warning Letters Tell Us

THOMPSON FDA
a division of CBIS

The FDA's Top Inspection Observations: What the Warning Letters Tell Us

For medical product manufacturers, the ongoing possibility that an FDA inspection will result in allegations of regulatory violations can be daunting.

Given the immense range of requirements enforced by the agency, it can be difficult to anticipate what FDA investigators may be looking for when they arrive at a manufacturing facility.

Nevertheless, targeting a company's compliance efforts effectively is critical.

In June 2025, the agency offered medical product manufacturers insights into where they should be focusing their compliance efforts.

The FDA's Office of Inspections and Investigations identified the top five inspection observations reported by its investigators over the past decade for manufacturers of drugs (in both domestic and foreign manufacturing facilities), biological products, and medical devices.

One of the best ways for medical product manufacturers to be aware of inspection trends and to remain compliant is to stay up to date on the violations that are being alleged by the agency in FDA enforcement letters.

In this white paper, the experts at Thompson FDA present examples of each of the top observations noted by the agency during inspections over the past few years, as reflected in recent FDA enforcement letters. The agency's enforcement letters are reported weekly to our subscribers and are added to our proprietary searchable FDA Enforcement Letter Database within hours of their release.

I. Drug inspection observations (Domestic and Foreign)

1. Procedures not in writing or fully followed

Dixon Investments Inc. dba ARI — The FDA issued a Sept. 17, 2025, Warning Letter to a Georgia-based drug manufacturer.

The company allegedly had not performed process validation for its over-the-counter (OTC) aerosol drug products — a repeat violation noted during previous inspections, according to the FDA. The firm said that it would outline control procedures to ensure that manufacturing processes were properly validated and that it would follow its current standard operating procedure (SOP) for collecting data on its drug products, but the agency faulted the company's response for not providing specific timelines.

Also, the company allegedly failed to test an adequate number of drug product batches, as defined by its written stability procedure — another repeat violation, the FDA said. The firm's response failed to address the lack of appropriate stability data to support the expiry dates of its drugs, according to the agency.

The FDA also alleged that the company's quality unit (QU) did not adequately exercise its authority and responsibilities — failing to ensure, for example, that there were adequate procedures for change controls, batch record release, and corrective and preventive action (CAPA); adequate review of control records (i.e., finished product testing) before release and distribution; and appropriate procedures for cleaning and maintaining manufacturing equipment.

In addition, the agency alleged that two of the company's drugs were unapproved new drugs and that two drugs were misbranded because, for example, the labeling of a first aid antiseptic drug did not warn users to stop using the product and ask a doctor if the conditions persisted or got worse.

2. Product discrepancies and/or failures were not investigated

Creative Essences Inc. — The FDA issued a Sept. 25, 2025, Warning Letter to a California-based manufacturer of OTC drugs.

The company's investigations into unexpected discrepancies were inadequate, the FDA alleged. "Your [QU] failed to thoroughly investigate all finished product batches and components associated with unexplained discrepancies," the agency said. "When an investigation was performed, you failed to identify the root cause(s), implement appropriate [CAPA], and expand the investigation to evaluate the impact on other batches or products."

Also, the company allegedly lacked appropriate sampling and testing to ensure that its drugs conformed to appropriate standards of identity, strength, quality and purity. "For example," the FDA said, "you failed to establish adequate procedures for finished drug product sampling to ensure adequate representation of each batch."

The firm also allegedly failed to conduct adequate identity testing on incoming components, including each shipment of each lot of glycerin and propylene glycol, components at higher risk for diethylene glycol (DEG) and ethylene glycol (EG) contamination.

In addition, the company allegedly lacked process validation data to demonstrate that it had adequately validated its manufacturing processes. The agency faulted the company's response for not providing a time frame for completing process validation for each drug and for not providing interim plans for any drugs distributed before validation was completed.

Moreover, the firm's QU allegedly failed to establish procedures describing the unit's roles and responsibilities, including batch release, investigations, change control and periodic product reviews; an adequate equipment cleaning and maintenance program; and an appropriate written testing program to assess the stability characteristics of drugs and to use the results of stability testing to determine appropriate storage conditions and expiration dates.

The manufacturer also allegedly marketed an unapproved new drug and a misbranded drug.

3. Lack of scientifically sound laboratory controls

Guangxi Yulin Pharmaceutical Group Co. Ltd. — The FDA issued a Sept. 30, 2025, Warning Letter to a Yulin, China-based drug manufacturer.

The company allegedly failed to adequately determine the appropriate laboratory testing necessary for its drugs. "For example," the FDA said, "you did not perform testing for identity and strength of the active ingredients prior to drug product release and distribution."

The firm also allegedly had failed to establish that the Chinese Pharmacopeia test methods and specifications that it used for its drugs were scientifically sound and appropriate to measure conformity with identity, strength, quality and purity standards or that they were equivalent to or better than the current United States Pharmacopeia compendial methods.

The company also allegedly lacked adequate stability data. “For example,” the agency said, “you have not established an appropriate stability program (e.g., frequency and methods) to assess stability characteristics, to ensure that your drug products meet their appropriate strength and quality attributes through their … shelf life.”

Moreover, according to the FDA, the firm’s laboratory equipment lacked sufficient controls to prevent and detect deletion or manipulation of the company laboratory's electronic raw data. “For example,” the agency said, “your ultraviolet-visible (UV-vis) and infrared (IR) spectroscopy equipment was found to lack audit-trail functionality, and your analysts were able to alter and delete data, files and folders.”

The FDA said that it had cited similar current good manufacturing practice (cGMP) observations during a September 2016 inspection.

On Sept. 26, 2025, the agency placed the company’s drugs offered for import into the United States on Import Alert 66-40.

4. Absence of written procedures

Wisconsin Pharmacal Co. L.L.C. — The FDA issued an Aug. 22, 2025, Warning Letter to a Wisconsin-based drug manufacturer.

According to the FDA, the company rejected units of a spray drug product that had been filled from particular vessels because the units failed an assay test release specification, but the manufacturer later released about half of the drug product units. The agency criticized the firm’s QU for not withholding all the rejected units.

The company also allegedly failed to adequately investigate microbial excursions for objectionable microorganisms. For example, the FDA alleged, *Staphylococcus aureus* was found in a batch of a cream drug product, but the firm released the batch for commercial distribution based on a passing retest result that the company obtained without thoroughly investigating the contamination’s root cause.

The agency also alleged that the company did not appropriately control the file modification and deletion privileges of its liquid chromatography and gas chromatography instruments. “Your firm does not review audit trails and raw analytical data captured by these analytical instruments,” the FDA said. “You do not have written procedures to review electronic data or integration to ensure data reliability for batch release.”

5. Cleaning, sanitizing, or maintenance discrepancies

Seatex L.L.C. — The FDA issued an April 1, 2024, Warning Letter to a Rosenberg, Texas-based manufacturer of OTC hand sanitizers, antibacterial soaps and other products.

The company allegedly manufactured its hand sanitizer products on equipment also used to manufacture industrial chemicals such as floor cleaner. The FDA noted that the firm could not provide cleaning validation studies to support its equipment cleaning procedures and post-wash testing.

Moreover, the company allegedly did not adequately investigate out-of-specification (OOS) results. "Your practice to test a new sample if the original result fails until either a … failing result or a passing result is obtained is not scientifically justified," the agency alleged. "Additionally, your firm does not record or retain the OOS test results for review or investigation. You also could not provide a procedure or policy governing retesting following an OOS result."

The company allegedly did not perform identity testing for incoming components, including testing ethanol for impurities such as ethanol, and the firm's specifications for glycerin allegedly did not include testing to ensure that the glycerin met the safety limits for levels of diethylene glycol or ethylene glycol.

The FDA also alleged that the company accepted supplier certificates of analysis, which did not include complete testing, without establishing the reliability of the suppliers' test analyses at appropriate intervals, and that the firm could not provide quality agreements with its ethanol suppliers.

The agency also faulted the company's quality unit for failing to provide "numerous" manufacturing records during the inspection and for failing to have a procedure for monitoring the firm's water system.

II. Domestic drug inspection observations

1. Procedures not in writing or fully followed

Acme United Corp. — The FDA issued an Oct. 10, 2025, Warning Letter to a Connecticut-based drug manufacturer.

The company allegedly failed to adequately design and control a water system that provided water as a component for the firm's drug products.

"For example," the FDA said, "you isolated the objectionable microorganism *Burkholderia cepacia (B. cepacia)* on numerous occasions within the holding tank and at the point of use. You regularly sanitized your water system after recovering *B. cepacia*, yet you continued to recover *B. cepacia* shortly after those repeated sanitization cycles. Microbiological monitoring of your system also yielded several 'too numerous to count' results at multiple points in the system. These data indicated the presence of a recalcitrant biofilm. Furthermore, your firm failed to conduct timely and comprehensive investigations into these out-of-limit (OOL) microbiological results, including documenting root cause determinations and product impact assessment."

In its response, the company stated that there was a low potential impact from the microbial contamination because little to no contamination was recovered in batch samples and because an active ingredient in the firm's drugs had an antimicrobial effect. The agency found the response to be inadequate. "Antimicrobial formulations are not a substitute for adequate cGMP," the FDA said. "Additionally, it is important to note that microbial contamination is not uniformly distributed, and samples may not be representative of the type or level of contamination that may exist within an entire system."

The agency added that a new on-demand water system installed by the company had "deficient elements that do not assure long-term system reliability and suitable water quality. … For example, stagnant water from an on-demand, non-recirculating system can foster the development of biofilms."

In addition, the FDA said, the company had failed to adequately validate its production and process controls, to adequately qualify its manufacturing equipment, and to follow appropriate written procedures designed to prevent microbial contamination, including validation of drug sterilization processes. For example, the firm had allegedly not performed quarterly dose audit studies for a sterilization process.

The company also allegedly released finished drug products without testing each batch for appropriate quality attributes. "For example," the agency alleged, "your firm distributed multiple batches of purportedly sterile finished drug products without conducting sterility testing." The firm acknowledged that it did not begin sterility testing of its drugs until the end of 2024. The FDA said that the company had not proved the method suitability of a sterility test performed by the firm's contract laboratory.

2. Investigations of discrepancies or failures lacking

Exela Pharma Sciences L.L.C. — The FDA issued a July 2, 2025, Warning Letter to a North Carolina-based drug manufacturer.

According to the FDA, the company invalidated failing growth promotion results — used to determine the suitability of media used for the sterility testing of finished drugs — without an adequate root cause investigation. One lot of one drug was used in the release sterility testing of multiple application drug products, despite growth promotion testing failing twice and passing on the third test, the agency said. "Your investigation concluded there was no product impact because retesting of the media ultimately achieved passing results," the FDA said. "Your investigation documented human performance as the cause of the failing testing events; … however, no specific human error was identified."

Moreover, the agency alleged, the company failed to accurately document microbiology testing results, and test results were not verified by a second person for accuracy. "Your analyst recorded fewer colony-forming units for active air environmental monitoring samples than what was observed by our investigator during the examination," the FDA said. "An independent review of the plate count by a second analyst to assure accuracy of the data was not conducted."

In December 2024, the company de-registered as an outsourcing facility. The agency alleged violations that would apply in case the firm resumed producing drug products intended to meet the Section 503B conditions for exemption from the FDA's premarket approval, adequate directions for use, and Drug Supply Chain Security Act requirements. The alleged violations included failures to establish production and process control procedures, to conduct laboratory testing for sterility, and to thoroughly investigate unexplained discrepancies or failures of batches to meet specifications.

3. Absence of scientifically sound laboratory controls

Fuller Industries Inc. — The FDA issued a June 28, 2023, Warning Letter to a Great Bend, Kansas-based manufacturer of OTC topical drug products including antibacterial hand soaps and hand sanitizers.

According to the FDA, the company's QU did not adequately oversee the manufacturing of the firm's drug products. For example, the agency said, the QU failed to ensure that assay testing for each batch of the active ingredient chloroxylenol (PCMX) was performed, appropriately documented and reviewed by the QU before release and distribution, and that there were appropriate procedures for investigating OOS and other nonconformances and for conducting thorough investigations. The FDA alleged that the company did not investigate nonconformances in the pH of its antibacterial foam hand soap and that

some PCMX assay results appeared to be OOS but were not investigated. The QU also allegedly had failed to establish an adequate ongoing stability program, to establish appropriate identification of samples listed on test records, and to perform annual product reviews.

In addition, the company allegedly failed to perform adequate identity testing of each component lot used to manufacture its OTC drug products, and it allegedly relied on its component suppliers' certificates of analysis without establishing the reliability of the suppliers' test analyses at appropriate intervals. "For example," the FDA said, "you failed to adequately test the propylene glycol used in the manufacture of your antibacterial foam hand soap. The identity testing of propylene glycol includes a limit test per the United States Pharmacopeia (USP) to ensure that the component meets the relevant safety limits for the levels of DEG or EG. Because you did not adequately perform the identity testing on each shipment of each propylene glycol lot using the USP identification test that detects these hazardous impurities, you failed to assure the acceptability of propylene glycol used in the manufacture of drug products."

The company also allegedly failed to appropriately test its incoming ethanol active pharmaceutical ingredient (API) for impurities such as methanol. Moreover, the company allegedly did not ensure that its test methods were appropriate for their intended uses. "You lacked a scientifically sound procedure for testing your antibacterial foam hand soap drug product for total solids," the agency said. "Your analysts provided our investigator with a non-validated test method from an internet search, which did not appear to be specific for your drug products nor appropriate for any drug product. Laboratories must establish and validate (or verify, where appropriate) analytical methods and procedures to ensure the robustness and consistency of testing. … Significant findings in this letter indicate that your QU is not able to fully exercise its authority and/or responsibilities. Your firm must provide the QU with the appropriate authority and sufficient resources to carry out its responsibilities and consistently ensure drug quality."

4. Absence of written procedures

Art of Beauty Co. Inc. — The FDA issued a May 22, 2024, Warning Letter to a Bedford, Ohio-based drug manufacturer.

According to the FDA, the company lacked adequate procedures describing the roles and responsibilities of its QU. "You could not provide procedures for investigations, CAPAs, change controls, recalls, and handling of complaints," the agency said. The QU also allegedly had not established a procedure for equipment maintenance, and the firm allegedly did not document instrument use, calibration or maintenance.

In addition, the FDA alleged, the company failed to adequately test its incoming components for identity before manufacturing its OTC hand sanitizer drug products. The agency said that the firm failed to adequately test glycerin and other high-risk incoming components for DEG or EG contamination. Although in its response the company committed to testing its existing component inventory for identity and for the presence of DEG and EG, the FDA faulted the firm for not committing to perform a retrospective impact assessment or provide a timeline for testing its distributed drug products within expiry to ensure that they were manufactured with safe and effective components.

Moreover, the company allegedly failed to adequately test its hand sanitizer drug products for potential microbial contamination, identity, and assay of isopropyl alcohol before batch release, and as of December 2023 the firm allegedly had not tested its water system for microbial contamination for at least six months. Also, the company allegedly had failed to validate its manufacturing processes for its OTC drug products.

The FDA also alleged that the company lacked adequate written procedures describing its cleaning process and appropriate documentation of its equipment cleaning. “You manufactured drug products using the same equipment used to manufacture nonpharmaceutical products, including nail polish remover, without validating your cleaning process,” the agency said. “You have not demonstrated that your cleaning process can prevent cross-contamination between your nonpharmaceutical and OTC drug products.”

5. Cleaning, sanitizing, or maintenance discrepancies

Aerosol and Liquid Packaging Inc. — The FDA issued a July 24, 2024, Warning Letter to a Baltimore-based contract manufacturer of OTC drug products.

According to the FDA, the company failed to test incoming active pharmaceutical ingredients and other drug product components for identity, purity, strength and other quality attributes, instead relying on the certificates of analysis (COAs) from its component suppliers without establishing the reliability of the suppliers’ test analyses at appropriate intervals.

Also, the firm allegedly had not shown that the water it used as a drug component was suitable for aqueous-based dosage form drug manufacturing and that at a minimum the water met USP monograph standards and appropriate microbial limits. “For example,” the agency said, “you failed to appropriately test for conductivity, total organic carbon, and microbial organisms.” The FDA criticized the company for saying that it would continue to rely on COAs upon receipt of raw materials.

Moreover, the firm allegedly failed to adequately qualify the equipment and validate the processes used to manufacture a topical antiseptic spray product. “You have not performed process performance qualification (PPQ) studies, nor did you have a meaningful ongoing program for monitoring process control to ensure stable manufacturing operations and consistent drug quality,” the agency said. “This is a repeat observation from the previous April 2014 and September 2016 FDA inspections.”

In addition, the FDA noted that the company manufactured OTC drug products and industrial-grade products such as laundry detergents on nondedicated equipment, and it alleged that the firm failed to conduct cleaning validation studies to demonstrate that its cleaning and disinfection practices were adequate to remove contaminants from the shared equipment.

The agency also said that the company failed to establish an adequate quality unit. The firm allegedly failed to ensure that laboratory records, batch records, and cleaning and maintenance records were complete and that product reviews were performed at least annually. “There was a fundamental failure of production management to effectively oversee the procedures, practices and suitability of manufacturing operations,” the FDA said, noting that this also was a repeat observation from previous inspections.

Also, the agency alleged that, based on claims on the product label and the product website, an OTC first aid antiseptic product manufactured by the company was an unapproved new drug. Indications included on the website were not permitted under the FDA’s OTC monograph for such products, the agency said. The product was also a misbranded drug, according to the FDA, because it was a nonprescription drug that did not comply with the marketing requirements of 21 U.S.C. §355h and that was not the subject of an application approved under 21 U.S.C. §355.

III. Foreign drug inspection observations

1. Procedures not in writing or fully followed

Healwell Homeo Private Ltd. — The FDA issued a June 12, 2025, Warning Letter to an Ahmedabad, India-based manufacturer of OTC drugs.

The company allegedly failed to test samples of its incoming drug components adequately. "During the inspection," the FDA told the firm, "you informed the investigator that you reviewed [COAs] for incoming materials, but did not perform identity testing, did not verify the supplier COA, and did not have a quarantine or approval process." The agency added that it was unacceptable for the company to fail to conduct identity testing on a drug component that the firm knew had been labeled as another component.

The FDA also alleged that the company's quality unit did not adequately oversee the firm's drug manufacturing. According to the agency, there were no written procedures for complaints, deviations, investigations, equipment cleaning and maintenance, employee training, and labeling, and the firm's production and process controls (including the qualification of manufacturing equipment), batch production and control records, test method procedures, sampling plans, and cleaning procedures were inadequate.

The FDA investigator also observed live rodents and birds and their excreta in areas where container closure systems and finished drug products were stored.

On March 31, 2025, the agency placed the company's drugs and drug products on Import Alert 66-40. Nine days later, the firm recalled the drug products manufactured at its facility that were in U.S. distribution.

2. Absence of scientifically sound laboratory controls

Wuhu Nuowei Chemistry Co. Ltd. — The FDA issued a Feb. 4, 2025, Warning Letter to a Wuhu, China-based drug manufacturer.

The firm allegedly failed to establish that its test methods for one API were scientifically sound and that its specifications for the API were appropriate. The company's method for testing for impurities was based on methods and specifications outlined in the Chinese Pharmacopeia, the FDA said, but the firm had failed to establish that the test methods were equivalent to or better than current USP compendial methods.

Also, the agency alleged, the company had failed to establish appropriate impurity specifications for the API. One lot of the API shipped to the United States exceeded USP monograph specification limits, the FDA said, and the firm's release testing had not included testing for related compounds as required by the USP.

Moreover, the company allegedly lacked adequate stability data to support the retest date for an API, and the firm's cleaning validation for shared equipment used to manufacture multiple APIs allegedly was inadequate. "You relied on visual inspection to determine cleanliness of your equipment and could not provide any analytical or microbiological data to support the efficacy of your cleaning procedures," the agency told the firm.

The FDA also noted that the quantity of one API shipped into the United States that had been labeled "For R&D only — Not for commercial" was inconsistent with quantities typically used in research and development.

On Jan. 24, 2025, the agency placed the company's products on Import Alert 66-40.

3. Investigations of discrepancies or failures lacking

Viatris Inc. — The FDA issued a Dec. 19, 2024, Warning Letter to a Canonsburg, Pennsylvania-based drug manufacturer following a June 2024 inspection of the Dhar, India, facility operated by the company's subsidiary Mylan Laboratories Ltd. Inc.

FDA investigators allegedly identified anomalies in four worksheets that reported passing identification testing results during component release testing. "Biometric access records documented that the responsible analysts were not physically present at the facility during testing," the agency said. "Despite their absence, they documented both the testing process and results as if they had conducted the analyses."

During discussions with the FDA after the inspection, the company disclosed that the facility and the company's global quality organization became aware of the facility's data integrity issues in January 2024. "FDA is concerned that you did not adequately investigate or begin to implement holistic corrective actions until after the subsequent FDA inspection," the agency told the company.

In addition, some investigations into discrepancies and out-of-specification results allegedly lacked scientific rationales to support the firm's root cause determinations. For example, the FDA said, in one case the company invalidated out-of-trend assay results and during retesting dismissed an anomalous content uniformity result, attributing the original issue to high-performance liquid chromatography (HPLC) column leakage. "However," the agency reported, "the equipment's audit trail did not document such an error, and you conducted retesting using different samples and equipment."

The FDA outlined a detailed data integrity remediation plan for the company. On Dec. 19, 2024, the agency placed the firm's imported products on Import Alert 66-40.

4. Absence of written procedures

Amman Pharmaceutical Industries — The FDA issued a Feb. 14, 2024, Warning Letter to an Amman, Jordan-based contract manufacturer of sterile OTC and homeopathic drug products.

According to the FDA, the company's facility and equipment were inadequate. "Your aseptic filling equipment design, suitability for intended use, cleanroom layout, HEPA-filtration coverage, protection of ISO 5 areas, and the number and complexity of personnel interventions during filling operations are deficient," the agency said.

The company also allegedly failed to ensure adequate environmental monitoring of classified areas used for aseptic production of sterile drug products. The frequency of environmental monitoring and personnel monitoring were inadequate, the agency said, as was the qualification of airflow in critical areas.

"You indicated to our inspection team that your firm had not experienced any alert, action, out-of-tolerance, or out-of-limit findings for environmental monitoring (EM), personnel monitoring, … sterility testing, in-process bioburden, media fills, biological indicators, raw material testing, or nonsterile finished product testing for the previous two years," the FDA said. "However, during our inspection, we observed that over 50 microbial excursions occurred (including out-of-limit recoveries from ISO 5 and ISO 7 areas)."

The agency also alleged that the company failed to establish adequate written procedures designed to prevent microbiological contamination risks in its facility and to ensure that such procedures were followed; it failed to sterilize all equipment that directly contacted constituents of the company's sterile products, including primary containers and closures; and the company's laboratory records lacked complete and trustworthy data to support the analyses performed. The FDA alleged that there were discrepant and missing data in the records, manipulation of the chromatographic integration parameters to erroneously obtain results that met established specifications, and a failure to retain original source data from the HPLC equipment.

In April 2023, the agency placed the company on Import Alert 66-40 after the company's response to the FDA's Section 704(a)(4) request for records the previous month allegedly demonstrated cGMP violations related to controls for DEG and EG. The agency acknowledged the firm's commitment to recall all drug products and suspend production of all drugs for the U.S. market.

5. Insufficient procedures for sterile drug products

Yangzhou Yulou Paper Products Co. Ltd. — The FDA issued a Sept. 9, 2025, Warning Letter to a Yangzhou, China-based manufacturer of OTC drugs.

According to the FDA, the company did not demonstrate that one of its drugs was rendered sterile by an appropriate manufacturing process such as aseptic processing or sterilization, and it did not show that it performed sterility testing using a validated method. "Sterile products introduced to the U.S. market must meet USP <71> Sterility Tests," the agency said.

The firm also allegedly did not show that it tested the identities of incoming drug components or that the chemical and microbiological properties of its drugs remained acceptable throughout the labeled expiry period. Moreover, the FDA said, the firm stated that no process validation activities had been performed on its drugs. The company told the agency that it had qualified a system in 2024, but it allegedly did not provide a summary report to support its statement as the FDA had requested.

Also, the firm allegedly failed to implement written procedures to establish a QU with cGMP responsibilities and with the authority to oversee the company's drug manufacturing. "For example," the agency said, "your response indicated there were no QU procedures for change control, customer complaints, annual product review, batch review, batch release or rejection, reprocessing and reworking, returns and salvaging, specifications, deviations, or [CAPA]."

On Aug. 26, 2025, the FDA placed the firm's drugs on Import Alert 66-40.

IV. Top Five Biological Product Inspection Observations Over the Past Decade

1. Lack of, or inadequate, standard operating procedures

BioStem Life Sciences — The FDA issued a Jan. 17, 2025, Warning Letter to a Florida-based manufacturer of cellular products derived from human umbilical cord and a product combining

amniotic membrane with amniotic fluid. According to the agency, the products were human cells, tissues, or cellular or tissue-based products (HCT/Ps) that were unapproved drugs and unlicensed biological products.

In addition, the FDA alleged significant cGMP violations. The firm allegedly had not performed routine nonviable particulate monitoring and surface sampling in an area of its facility where the company's products were exposed to the environment. "The environmental monitoring frequencies described in [a company environmental controls and monitoring procedure] are not sufficient to detect potential environmental contamination risks and demonstrate control inside the critical manufacturing area during manufacturing," the FDA said. The agency said that monitoring should occur during every production batch and that the frequencies described in a company procedure were not sufficient to detect potential environmental contamination. The FDA also faulted the firm for not requiring microbiological monitoring of operators' arm coverings used in the aseptic processing area.

Moreover, the company allegedly had not validated its procedure for cleaning and disinfecting ISO 5 and ISO 7 areas in the facility or its manufacturing processes with respect to product identity, strength, quality and purity. The company's limited testing was not sufficient to test for these attributes, the agency alleged. Also, finished product testing allegedly was limited to sterility and endotoxin testing and did not demonstrate, for example, the identity or strength of the firm's products.

The company also allegedly assigned expiration dates to its products without adequate supporting data.

The FDA noted that the products' instructions for use stated, "This allograft is processed aseptically, but is not sterile." "If your products are not sterile," the agency told the firm, "FDA has serious safety concerns regarding their use on patients via injection. FDA expects injectable products to be sterile, consistent with basic quality standards and to ensure patient safety."

2. Thorough investigations lacking

Skye Biologics Holdings L.L.C. — The FDA issued a Dec. 16, 2024, Warning Letter to a California-based manufacturer of placental connective tissue matrix allograft products derived from umbilical cord. The agency alleged that the products were HCT/Ps that were also unapproved new drugs and unlicensed biological products.

The products — which were intended to modulate inflammation and promote the remodeling of tissues as well as for anti-inflammatory, anti-fibrotic, and anti-microbial purposes — failed to meet the minimal manipulation criterion defined for structural tissue, the FDA said, because the firm's processing altered the original relevant characteristics of the umbilical cord. "The processing of the umbilical cord from the form of a conduit into a flowable form, drastically alters the physical state of the HCT/P," the agency said.

The FDA also alleged violations of cGMP requirements. According to the agency, the firm had

not validated the manufacturing processes for its products with respect to identity, strength, quality and purity; it did not perform nonviable particulate monitoring or viable microbial monitoring within its ISO 5 laminar flow hoods, which were located in an unclassified area, or conduct personnel monitoring of operators who processed the products; it had not established appropriate specifications to assure that its products conformed to appropriate identity, strength, quality and purity standards; it failed to perform endotoxin testing on finished product batches; it had failed to investigate three action-level excursions for environmental monitoring observed in the aseptic processing area; its batch production records did not document the accomplishment of each significant manufacturing step or the persons performing each of the steps; and it had assigned a five-year expiration date for the products without supporting data regarding the stability characteristics of the products.

3. Concurrent documentation lacking

Utah Cord Bank L.L.C. — The FDA issued a May 11, 2021, Warning Letter to a Sandy, Utah-based cord blood banking company.

According to the FDA, the company failed to validate the microbiological testing and other processing used in the manufacture of its HCT/Ps to ensure that the process did not cause contamination or cross-contamination and prevented the introduction, transmission or spread of communicable disease through use of the HCT/P. Also, the agency alleged, the company's processing of HCT/Ps included exposing a unit of cord blood to the environment by draining umbilical cord blood from the original collection bag into vials, which the FDA said could reasonably be expected to cause contamination or cross-contamination of the HCT/Ps.

Moreover, according to the agency, the company had not established and maintained procedures for its facilities, environmental control, equipment maintenance, cleaning and calibration, the verification of supplies and reagents, processing controls, labeling controls, storage, receipt, pre-distribution shipment, and distribution, including release criteria and shipping conditions.

The company also allegedly had not maintained complete concurrent records for facility cleaning and sanitation, environmental control and monitoring, equipment maintenance, cleaning, sanitizing and calibration, receipt, verification and lot numbers for each supply and reagent used to manufacture HCT/Ps, storage temperatures, recovery, processing (including sterility testing), and complaints.

The agency also told the company that it was unclear whether its products were intended for autologous use only or whether they were also intended for allogeneic use in a first-degree or second-degree blood relative. The FDA called for the company to clarify all potential uses of its products.

4. Lack of, or inadequate, required records

InVia Fertility Specialists P.L.L.C. — The FDA issued a June 13, 2025, Warning Letter to an Illinois-based fertility clinic.

The clinic allegedly failed to test donor specimens for evidence of infection due to relevant communicable disease agents. For example, the FDA alleged, an anonymous oocyte donor was not tested for HIV-1, the hepatitis C virus or the hepatitis B virus. HCT/Ps were recovered from the donor in April 2024 and transferred to a recipient, the agency said.

Moreover, the clinic allegedly failed to screen donors by reviewing relevant medical records for disease and disease agent risk factors. The records for one anonymous oocyte donor whose HCT/Ps were transferred to a recipient allegedly lacked documentation of a medical history interview, for example.

In addition, from January 2023 through November 2024 the clinic allegedly failed to determine and document the eligibility of approximately six anonymous oocyte donors and four directed oocyte donors whose oocytes were retrieved and fertilized to produce HCT/Ps that were transferred to recipients.

Also, HCT/Ps from two semen donors allegedly were not labeled with required warning labels even though the donors tested reactive for relevant communicable disease agents, and the clinic's procedures allegedly did not require physical examinations of donors, provide complete relevant communicable disease testing requirements, or require the determination and documentation of donor eligibility.

The FDA said that two violations documented during an inspection conducted in January and February 2025 had been documented during a September 2022 inspection, indicating that corrective actions were not implemented or were not effective.

5. Biological product deviation report missing or inadequate

Janssen Vaccines Corp., A Johnson & Johnson Co. — The FDA issued a July 18, 2025, Warning Letter to an Incheon, South Korea-based drug manufacturer.

The company allegedly failed to conduct adequate investigations of recurring complaints between November 2023 and November 2024 involving stoppers used with the firm's injectable drugs. Although the firm's investigations did not identify any "relevant issue" and the company found that its manufacturing process was "in a validated state of control," the FDA faulted the investigations for not including a comprehensive assessment of human use, manufacturing and stability factors that could increase the risk of the problem, for not sufficiently collecting vial samples linked to the complaints, and for not investigating its stopper processing methods and other manufacturing factors.

Also, the company's quality unit did not consistently follow its procedures for submitting regulatory notifications of product quality defects, the agency said. The firm allegedly did not submit timely biological product deviation reports (BPDRs) to regulatory authorities. "You did not propose a retrospective review of complaints implicating marketed product quality to identify additional instances in which a BPDR should have been submitted," the FDA also told the firm.

V. Top Five Medical Device Inspection Observations Over the Past Decade

1. Lack of, or inadequate, procedures

Dongguan Rainbow Tech Electronic & Plastic Products Co. Ltd. — The FDA issued an Oct. 7, 2025, Warning Letter to a Dongguan, China-based manufacturer of Class II manual emergency ventilators.

The agency alleged "a significant lack of process control" at one step of the manufacturing process. "The process parameters were not adequately monitored," the FDA said, "nor were they adequately documented in either the daily set-up log or batch records."

Also, the company allegedly did not have a validation report for a machine that manufactured a ventilator component. "This encompasses two distinct instances demonstrating the lack of process

validation: the absence of original validation and no validation following lower platen replacement," the agency said.

Moreover, the firm allegedly had not documented the calibration of another component manufacturing machine. "The quality team stated no calibration records existed for the station's mechanisms," the FDA alleged.

The agency also said that the firm's documentation practices revealed deviations from a document controls procedure "in two areas: uncontrolled forms and improper corrections," including the use of liquid correction fluid on a device history record in violation of the company's record control procedures.

2. Lack of, or inadequate, complaint procedures

Contec Medical Systems Co. Ltd. — The FDA issued an Oct. 2, 2025, Warning Letter to a Qinhuangdao, China-based device manufacturer.

According to the FDA, the firm's CAPA procedures were inadequate. The agency said that the causes of nonconformities were not adequately investigated, corrective actions were not properly documented, completion of a preventive action (the creation of a cybersecurity management plan) was not documented before the CAPA was closed, and the company had not verified that customers were correctly interpreting actions to be taken in response to an open recall.

In addition, the FDA alleged, test plans created to validate device software designs did not ensure that validation testing was performed under adequately defined operating conditions. "For example," the agency said, "test plans do not include established acceptance criteria prior to testing." Moreover, it alleged, test reports did not confirm that design outputs met design inputs, software design validations were not documented in device history files, and the firm failed to adequately implement a risk management procedure for product software.

The FDA also said that several complaints from e-commerce sites and a complaint from Canada's Medical Devices and Clinical Compliance Directorate were not logged in a complaint log for handling through the firm's complaint handling procedure and were not evaluated for reportability to the agency. Also, the FDA alleged, feedback associated with user error or known product quality degradation associated with component longevity was not documented as complaints for trending or investigation.

The agency also faulted the company for allegedly failing to have a software test plan available for investigator review during an inspection and for allegedly not including a paragraph from a customer recall notification letter in the version of the letter sent to the FDA.

3. Purchasing controls, or lack of, or inadequate, procedures

Exer Labs Inc. — The FDA issued a Feb. 10, 2025, Warning Letter to the Denver-based manufacturer of the Exer Scan device, which was marketed as using clinical artificial intelligence (AI) to diagnose and treat musculoskeletal disorders.

The device allegedly lacked marketing authorization by the agency. According to the FDA, the claims made about the device by the firm were intended uses different from those of legally marketed measuring exercise equipment devices classified under 21 C.F.R. §890.5360, meaning that the company's device was not exempt from 510(k) requirements.

"Use of [AI]-based algorithms to screen and diagnose musculoskeletal or neurological disorders, including Parkinson's, musculoskeletal tuberculosis and cerebral palsy are diagnostic functions that are not limited to measurement of exercises," the agency told the firm. "Performing proprietary analyses of patient data for the screening and diagnosis of specific conditions or disorders represents a new intended use compared to use in rehabilitation or physiotherapy to provide or facilitate exercise rehabilitation and to include exercise measurement capabilities, such as for redevelopment of muscles for restoration of motion and providing accompanying measurement of range of motion."

The FDA called for the firm to stop commercial distribution of the devices for the uses indicated by product claims posted on the company's website.

In addition, the agency alleged nonconformance with the cGMP requirements of the quality system regulation. The FDA said that the firm had not established procedures for design controls, complaint handling, corrective and preventive actions, purchasing controls, management review, quality audits, or training. Moreover, the company allegedly had not conducted management reviews since it had been in operation, and it allegedly had not maintained records of training provided to staff.

4. Lack of written medical device reporting procedures

Les Encres L.L.C. — The FDA issued a July 30, 2025, Warning Letter to a Tennessee-based manufacturer of absorbable polydioxanone (PDO) surgical sutures.

The company allegedly failed to document, review and evaluate complaints as required by its complaint handling procedure. "For example," the FDA said, "you received emails with alleged deficiencies potentially related to the identity, quality, durability, reliability, safety, effectiveness or performance of your absorbable PDO surgical suture devices. These complaints were not logged, assigned a complaint number, assessed for complaint category type, investigated, reviewed for reportability, evaluated to determine if your device met all specifications and claims, nor evaluated to determine if [CAPAs] were needed."

The agency also alleged that the firm failed to implement a procedure requiring documentation of CAPAs and verification or validation that CAPAs were effective, and that the company lacked a procedure describing the process by which suppliers, contractors and consultants were evaluated and how their approval status was documented.

Also, the FDA said, despite being responsible for complaint investigations, the company's clinical specialist had not been trained on the firm's complaint handling procedure. "At least five complaints concerning absorbable PDO surgical sutures … were not documented, investigated or handled as complaint records," the agency alleged. Moreover, the company's sales personnel allegedly had not been trained to help perform and document complaint investigations, even though the complaint handling procedure called for them to do so.

The FDA also alleged that the firm's medical device reporting (MDR) procedure did not have standardized procedures for how to determine whether an event was reportable, how to perform an investigation, or how to evaluate the cause of an event. The agency recommended that the firm establish an active Electronic Submissions Gateway (ESG) production account for the electronic submission of MDR reports.

In addition, the FDA alleged that the company's Les Encres threads were unapproved and uncleared devices because the firm promoted the product for specific cosmetic uses, a major change from the indications for which the devices had received 510(k) clearance and a change that raised safety and

effectiveness concerns different from those normally associated with the agency-cleared uses of the devices.

5. Lack of, or inadequate, process validation

Onkos Surgical Inc. — The FDA issued a July 21, 2025, Warning Letter to the specification developer of the Eleos Limb Salvage System, indicated for use in total hip and knee arthroplasty to reduce or relieve pain and/or improve hip function in skeletally mature patients with select conditions.

According to the FDA, the company failed to adequately implement the section of its supplier, purchasing and inspection controls procedure that required the firm to ensure ISO 13485 compliance on the part of its Tier 1 suppliers. The company allegedly did not ensure compliance by three of its suppliers with ISO 13485 process validation requirements, failing to adequately document assessments of the suppliers' cleaning validations.

The firm also allegedly failed to implement a postmarket surveillance procedure that required the company to open a CAPA when an analysis of infection complaints reached a certain level. It also allegedly failed to implement a risk management process procedure to evaluate whether the risk table for the device needed to be updated.

Moreover, the company acknowledged that sampling plans for the incoming device history records from a supplier "were not traceable to a documented valid statistical rationale."

The agency also alleged that on three occasions the company failed or refused to submit timely reports to the FDA for device corrections or removals.

THOMPSON FDA
a division of CBIS

For decades we've helped professionals like you confront the most pressing compliance challenges, with expert guidance and insight that can help you navigate critical regulatory mandates and avoid enforcement actions. Choose from any of the subscriptions below to keep up with the shifting requirements, recommendations and expectations of the FDA and the other government agencies that regulate your products, your business and your personnel. Annual subscriptions include rolling digital updates, news, analysis and more at no additional charge for the 12-month subscription period.

FDA Advertising and Promotion Manual & Module

Avoid missteps surrounding federal advertising and promotion requirements for drugs, medical devices, biological products, foods and veterinary products.

FDA Enforcement Manual & Module

Protect yourself and your company when dealing with inspections, Warning Letters and other FDA enforcement measures.

Guide to Medical Device Regulation & Module

Speed your new device to market and ensure that you understand your postmarket obligations.

Guide to U.S. Food Labeling Law & Module

Avoid recalls and other costly and embarrassing FDA and USDA enforcement actions targeting noncompliant food and dietary supplement labeling.

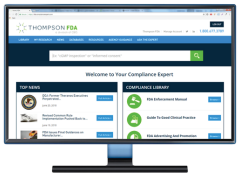
Guide to Good Clinical Practice & Module

Your one-stop resource for clinical trial regulations, guidance and best practices.

PREMIUM

FDA Compliance Expert Suite

An online library providing the content of all of Thompson's FDA publications and databases with authoritative information about compliance with the FDA's requirements in the areas of enforcement, medical devices, advertising and promotion, food labeling and clinical trials.



LEARN MORE AND ACTIVATE A TRIAL OF ANY THOMPSON FDA ONLINE SUBSCRIPTION AT NO COST.
fda.thompson.com/subscriptions

The FDA's Top Inspection Observations: What the Warning Letters Tell Us

is published by:
Thompson FDA, a division of CBIS
1530 Wilson Boulevard, Suite 400
Arlington, VA 22209

Copyright ©2025 by Thompson FDA, a division of Columbia Books, Inc. All rights reserved.

This information is designed to be accurate and authoritative, but the publisher is not rendering legal, accounting or other professional services. If legal or other expert advice is desired, retain the services of an appropriate professional.