

Efficient Management of Sample Reception and Documentation at the Croatian Veterinary Institute, Zagreb, Croatia

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Abstract

The reception office at the Croatian Veterinary Institute plays a crucial role in ensuring the accurate and efficient handling of samples and accompanying documentation, and serves as the first point of contact for veterinarians and inspectors regarding samples, or for clients who call by phone. This paper outlines the best practices for managing sample reception, emphasising the importance of proper documentation, the use of technology to streamline processes, and the implementation of quality control measures. Proper documentation is essential for maintaining sample traceability and integrity, which is critical for accurate testing and analysis. The use of tech-

nology, such as electronic documentation systems and barcode scanning, can significantly enhance the efficiency and accuracy of the sample reception process. Additionally, implementing quality control measures, including regular audits and staff training, ensures the reliability and consistency of the reception process. By adopting these best practices, the Croatian Veterinary Institute can improve its operational efficiency and reduce the risk of errors, thereby contributing to public health and safety.

Key words: *sample reception; documentation; Croatian Veterinary Institute; quality control; technology*

Introduction

The Croatian Veterinary Institute, Zagreb, Croatia is responsible for conducting various tests and analyses on animal samples to ensure public health and safety. These tests are crucial for detecting diseases, monitoring animal health, and ensuring the safety of animal products for human consumption (Smith, 2020). The reception office is the first point of contact for these samples, making it essential to have a well-organised system in

place for their reception and documentation. Proper sample reception and documentation are critical for maintaining the integrity and traceability of samples, which directly impacts the accuracy and reliability of test results (MDS, 2025).

The reception process involves several key steps, including the initial receipt of samples, verification of accompanying documentation, and proper labelling and storage of samples. Each of these steps must be meticulously

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managed to prevent errors and ensure that samples are handled correctly (Williams, 2018). The use of electronic documentation systems and barcode scanning technology can significantly enhance the efficiency and accuracy of the sample reception process, reducing the risk of misplacement or loss (Kubánová et al., 2022).

Furthermore, implementing quality control measures, such as regular audits and staff training, is essential to ensure the reliability and consistency of the reception process. These measures help identify and address any issues that may arise, ensuring that the reception office operates smoothly and effectively (Lee et al., 2016; Westgard, 2003). By adopting these best practices, the Croatian Veterinary Institute can improve its operational efficiency and reduce the risk of errors, thereby contributing to public health and safety.

Sample Reception

The sample reception process involves several steps (Table 1), including the initial receipt of samples, verification of accompanying documentation, and proper labelling and storage of samples. It is important to have a standardised procedure in place to ensure consistency and accuracy (MDS, 2025). The initial receipt of samples involves checking the condition of the samples and ensuring that they are properly sealed and labelled. Any discrepancies or issues with the samples should be documented and addressed immediately (Smith, 2020). Verification of accompanying documentation is a critical step in the sample reception process. This includes checking that all required information is provided, such as the sample’s origin, type, and any relevant information provided by

Table 1. Sample Reception Process Steps. A comprehensive overview of the key steps involved in the sample reception process, along with specific actions and responsible personnel for each step

Step	Description	Actions	Responsible Personnel
Initial Receipt	Checking the condition of samples, ensuring proper sealing and labelling	- Inspect sample packaging - Verify sample labels - Document any discrepancies	Reception Staff
Documentation Verification	Ensuring all required information is provided (origin, type, sender details)	- Cross-check documentation with sample - Confirm completeness of information - Record details in system	Reception Staff
Labelling and Storage	Proper labelling with unique identifiers and appropriate storage conditions	- Assign unique identifiers - Label samples accordingly - Store samples in designated areas	Reception Staff
Data Entry	Recording sample details into the electronic system	- Enter sample information into electronic tracking system - Generate barcode labels	Data Entry Personnel
Quality Control Check	Ensuring accuracy and consistency in the reception process	- Conduct random audits - Review documentation and labelling - Address any identified issues	Quality Control Team

the sender. Proper documentation ensures the traceability and integrity of samples, which is essential for accurate testing and analysis (Williams, 2018). Proper labelling and storage of samples are also crucial to maintain their integrity. Samples should be labelled with unique identifiers and stored in appropriate conditions to prevent contamination or degradation. The use of electronic tracking systems can help ensure that samples are accurately tracked from receipt to analysis, reducing the risk of misplacement or loss (Kubáňová et al., 2022).

Documentation

Accurate documentation is critical for the traceability and integrity of samples. This includes recording the sample's origin, type, and any relevant information provided by the sender. The use of electronic documentation systems can help streamline this process and reduce the risk of errors (Williams, 2018). Electronic documentation systems allow for the efficient recording and retrieval of information, reducing the risk of errors associated with manual documentation (Smith, 2020). In addition to recording the sample's origin and type, it is important to

Table 2. A detailed overview of the technology implementations in the sample reception process, along with their purposes, benefits and implementation steps

Technology	Purpose	Benefits	Implementation Steps
Barcode Scanning	Quick and accurate identification of samples	Reduces errors associated with manual labelling and tracking	- Install barcode scanners - Train staff on usage - Integrate with existing systems
Electronic Tracking Systems	Real-time tracking of sample location and status	Enhances efficiency and accuracy - Provides real-time updates - Reduces risk of misplacement	- Implement tracking software - Train staff on system usage - Regular system updates
Electronic Documentation Systems	Efficient recording and retrieval of sample information	Reduces errors associated with manual documentation - Streamlines documentation process	- Install documentation software - Train staff on usage - Regular system maintenance
Automated Alerts and Reports	Identifying and addressing issues promptly	Improves process management - Provides timely alerts and reports	- Configure alert and report settings - Train staff on interpreting alerts and reports
Data Analytics Tools	Analysing sample reception data for process improvement	Identifies trends and areas for improvement - Enhances decision-making	- Implement data analytics software - Train staff on data analysis - Regular data reviews
Cloud Storage Solutions	Secure and accessible storage of sample data	Ensures data security and accessibility - Facilitates remote access	- Set up cloud storage - Train staff on data access and security - Regular backups

document any relevant information provided by the sender. This may include details about sample collection, handling, or storage conditions. Proper documentation ensures that all relevant information is available for analysis, which is essential for accurate testing and interpretation of results (MDS, 2025).

Technology in Sample Reception

The implementation of technology (Table 2), such as barcode scanning and electronic

tracking systems, can greatly improve the efficiency of the sample reception process. These tools help ensure that samples are accurately tracked from receipt to analysis, reducing the risk of misplacement or loss (Kubáňová et al., 2022). Barcode scanning technology allows for the quick and accurate identification of samples, reducing the risk of errors associated with manual labelling and tracking (Williams, 2018). Electronic tracking systems provide real-time information about the location and status of samples, allowing for efficient management of the

Table 3. A detailed overview of the quality control measures in place, along with their descriptions, frequency, and responsible personnel

Measure	Description	Frequency	Responsible Personnel
Regular Audits	Identifying issues or discrepancies in the sample reception process	Quarterly	Quality Control Team
Staff Training	Ensuring familiarity with standardised procedures and best practices	Annually	Training Coordinator
Standardised Procedures	Consistency and accuracy in sample reception	Continuous	Reception Staff
Random Sample Checks	Randomly checking samples to ensure proper labelling and documentation	Monthly	Quality Control Team
Equipment Calibration	Regular calibration of equipment used in sample reception and documentation	Biannually	Technical Staff
Documentation Review	Reviewing documentation for completeness and accuracy	Weekly	Reception Supervisor
Incident Reporting	Documenting and addressing any incidents or discrepancies	As Needed	All Staff
Process Improvement	Continuous evaluation and improvement of reception processes	Ongoing	Quality Control Team
Compliance Monitoring	Ensuring adherence to regulatory and institutional guidelines	Biannually	Compliance Officer
Feedback Collection	Gathering feedback from staff to identify areas for improvement	Quarterly	Quality Control Team

sample reception process. These systems can also generate reports and alerts, helping to identify and address any issues that may arise (Smith, 2020). The use of technology in sample reception not only improves efficiency but also enhances the accuracy and reliability of the process (Kubáňová et al., 2022).

Quality Control

Quality control measures (Table 3) are essential to maintain the integrity of samples and the accuracy of test results. This includes regular audits of the reception process, staff training, and the use of standardised procedures (WHO, 1996). Regular audits help identify any issues or discrepancies in the sample reception process, allowing for timely corrective actions (Smith, 2020). Staff training is also crucial to ensure that all employees are familiar with the standardised procedures and best practices for sample reception. Training programmes should be regularly updated to reflect any changes in procedures or technology (MDS, 2025). The use of standardised procedures ensures consistency and accuracy in the sample reception process, reducing the risk of errors and improving the reliability of test results (Williams, 2018).

Conclusion

The reception office at the Croatian Veterinary Institute, Zagreb, Croatia plays a vital role in ensuring the accurate and efficient handling of samples and accompanying documentation. By implementing best practices, utilising technology, and maintaining strict quality control measures, the institute can ensure the integrity of its testing processes and contribute to public health and safety. Proper sample reception and documentation are critical for maintaining the traceability and integrity of samples, which directly impacts the accuracy and reliability of test results. The use of technology, such as electronic documentation systems

and barcode scanning, can significantly enhance the efficiency and accuracy of the sample reception process. Additionally, implementing quality control measures, including regular audits and staff training, ensures the reliability and consistency of the reception process. By adopting these best practices, the Croatian Veterinary Institute can improve its operational efficiency and reduce the risk of errors, thereby contributing to public health and safety.

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Učinkovito upravljanje prijemom uzoraka i dokumentacijom u Hrvatskom veterinarskom institutu, Zagreb, Hrvatska

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Prijemni ured u Hrvatskom veterinarskom institutu, Zagreb, Hrvatska ima ključnu ulogu u osiguravanju točnog i učinkovitog rukovanja uzorcima i pratećom dokumentacijom. Ovaj rad opisuje najbolje prakse za upravljanje prijemom uzoraka, naglašavajući važnost pravilne dokumentacije, korištenje tehnologije za pojednostavljenje procesa i implementaciju mjera kontrole kvalitete. Pravilna dokumentacija je ključna za održavanje sljedivosti i integriteta uzoraka, što je kritično za točno testiranje i analizu. Korištenje tehnologije, kao što su sustavi elektroničke dokumentacije i skeniranje

barkodova, može znatno poboljšati učinkovitost i točnost procesa prijema uzoraka. Osim toga, implementacija mjera kontrole kvalitete, uključujući redovite revizije i obuku osoblja, osigurava pouzdanost i dosljednost procesa prijema. Usvajanjem ovih najboljih praksi, Hrvatski veterinarski institut Zagreb, Hrvatska može poboljšati svoju operativnu učinkovitost, smanjiti rizik od pogrešaka i doprinijeti javnom zdravlju i sigurnosti.

Ključne riječi: *prijem uzoraka, dokumentacija, Hrvatski veterinarski institut, kontrola kvalitete, tehnologija*