

PATHOGEN ASSET CONTROL SYSTEM (PACS)

The Pathogen Asset Control System (PACS) is a system for accounting, management and control of biological agent stocks. PACS is a comprehensive and flexible solution for tracking detailed information on biological materials of any kind throughout their entire lifecycle.



PACS is a highly customizable system and can be configured to meet your exacting requirements, help comply with stringent regulations, simplify data entry,

as well as custom reporting capabilities. Powerful, yet easy to use features such as Data Import help you import existing data from disparate systems, getting you up and running quickly. Full barcoding and RFID support lets you take advantage of barcode technology. You can design the labels and control the inventory.

PACS provides a full range of features from batch data entry and exact locations with graphical representation to detailed audit trails and remote supervisory control over user specified operations.

The PACS system administration functions allow user access by functions or location where biological agents are stored. The audit and event log track biological agents and the repository inventory feature provides quick and accurate inventory reconciliation.

PACS was built on proven Microsoft platforms and SQL Server technology and delivers robust performance, multi-lingual support and secure data storage.

Black & Veatch, founded in 1915, designed and built PACS from the scratch up for a specific purpose – to help manage and provide control over biological agents stocks.

Features	Benefits
Comprehensive solution for tracking biological agents	PACS gives you confidence all your biological agents are tracked and accounted for to help you meet regulatory compliance requirements
Highly customizable	Easily customize the system to match your laboratory operations
Powerful and easy data import capability	Import all of your existing data seamlessly and accurately
Batch data entry and processing	Focus on research – save time on data entry
Full barcode and RFID support	Take full advantage of barcode and RFID technologies
Custom reports	Get the data you need in the format you want

CORE SYSTEM

- Tracking all kinds of biological agents
- Standalone or networked
- OS Support: Server 2008, XP/Vista/7
- Excellent performance on over 5 million records database
- Barcode and RFID technologies support
- Batch data entry and processing
- Customizable data entry forms and reports
- Material-Aliquots traceability
- Absolute Location of vials: ...Room, Freezer, Shelf, Box, Cell
- Tracking exact volumes of vials
- Multi-Lingual Application
- Full documentation support

OPERATIONAL

- Data Import
- Batch Material Registration
- Material Transfer
- Material Destruction
- Vials/Containers Movement
- Repository Inventorying/Auditing
- Aliquoting
- Subculturing
- Search Engine

ADMINISTRATIVE

- Repository Configuration
- Barcode Label Designer
- Customizable Forms Editor (Data entry forms)
- Microorganism Classification management
- Geographical Locations
- References Tables Management
- Object Numbering System for documents and barcodes

The screenshot shows the 'Bacteria Repository' software interface. On the left, a tree view displays the repository structure: Bacteria Repository > Freezer 2 [HSDO-1303] > Shelf 4 (1/1) > Box 2 (18/81) Kopo... > Box 1 (19/57) C... Below this, a table titled 'Containers' shows the internal structure of the selected container. The table has columns for Barcode, Location, Material, and Container type. The data rows are as follows:

Barcode	Location	Material	Container type
C100066	(18)	M100008 - Brucella suis	Ampoule
C100070	(21)	M100008 - Brucella suis	Ampoule
C100071	(22)	M100008 - Brucella suis	Ampoule
C100076	(32)	M100008 - Brucella suis	Vial
C100077	(33)	M100008 - Brucella suis	Vial
C100067	(34)	M100008 - Brucella suis	Ampoule
C100068	(35)	M100008 - Brucella suis	Ampoule

At the bottom of the interface, there is a blue bar with the text 'REPOSITORY MANAGEMENT' and several icons for actions like Remove, Transfer out, Destroy, Re-culturing, and Splitting.

SECURITY

- Event Log (user, date/time, action, details)
- Audit trails for every material
- Rapid Repository Inventorying/Auditing
- Separate Access Control
- User Accounts Management
- Password protected Database Backup/Restore
- Remote authorization (supervisory control)

REPORTING

- Customizable Reporting
- Pre-defined reports: Tracking forms, Acts for all Operations, Inventory Audit report, Event Log, Pathogen Movement Journal, Material Summary, Registration Book of Materials, Subdivision Content
- Configurable barcode labels
- APHIS/CDC Form 2

The screenshot shows the 'Check existence and locations of' dialog box in the Bacteria Repository software. It includes a text field for 'Enter container barcode:' and a 'Check' button. Below this, a tree view shows the repository structure: Bacteria Repository > Freezer 2 [HSDO-1303] > Shelf 4 (1/1) > Box 2 (18/81) Kopo... > Box 1 (19/57) C... To the right of the tree view is a grid of 50 numbered circles (1-50) representing individual containers. Some circles are highlighted in green, some in red, and some in grey, indicating their status. At the bottom of the interface, there is a blue bar with the text 'INVENTORY AUDIT PROCESS'.

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Black & Veatch (www.bv.com) is a global leader in the consulting, engineering, construction and operation of what the world needs now and in the future in the crucial areas of energy, water and telecommunications and in providing up-to-the-minute services in the fast-changing federal and environmental markets. Founded in 1915, the employee-owned, \$2.3 billion company operates out of more than 110 offices worldwide and has completed projects in more than 100 countries.

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