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accuracy is key

# The Future of Buffer Preparation Has Arrived

## Introducing the accroma® bufferPrep system

***Intelligently increases productivity, reproducibility and traceability in your labs through automated buffer preparation***

# Manual buffer preparation is inefficient and error-prone

Manual buffer preparation is tedious, inefficient and challenging to document with traceability. Scientists handling these processes face exposure to chemicals, and the potential for human error introduces variability, often leading to irreproducible results. In biopharmaceutical research and development, biological reagents and materials are the leading contributors to irreproducibility, accounting for 36% of cases. Ultimately, manual buffer preparation is a low-value activity unpopular among scientists.

**Source:** Baker, M. Irreproducible biology research costs put at $28 billion per year. Nature (2015)

# Buffer delivery has long lead times

Ordering premixed stock or custom buffers often come with a long lead time, which limit flexibility and efficiency of experiments. The ageing of the buffers may be an additional problem.

**Automation brings consistency and traceability to your labs while making your experiments reproducible.**

# A Buffer Vending Machine for your Lab(s)

The system automates manual preparation of buffers, from solids and liquids, producing error-free and freshly made buffers. Consistent preparation of buffers provide repeatability and reproducibility of data. The technology has been designed to optimize lab efficiency, increase productivity allowing scientists to execute repeatable experiments and gain time.

## INPUT

12 Solid lines
12 Liquid lines
Water


## OUTPUT

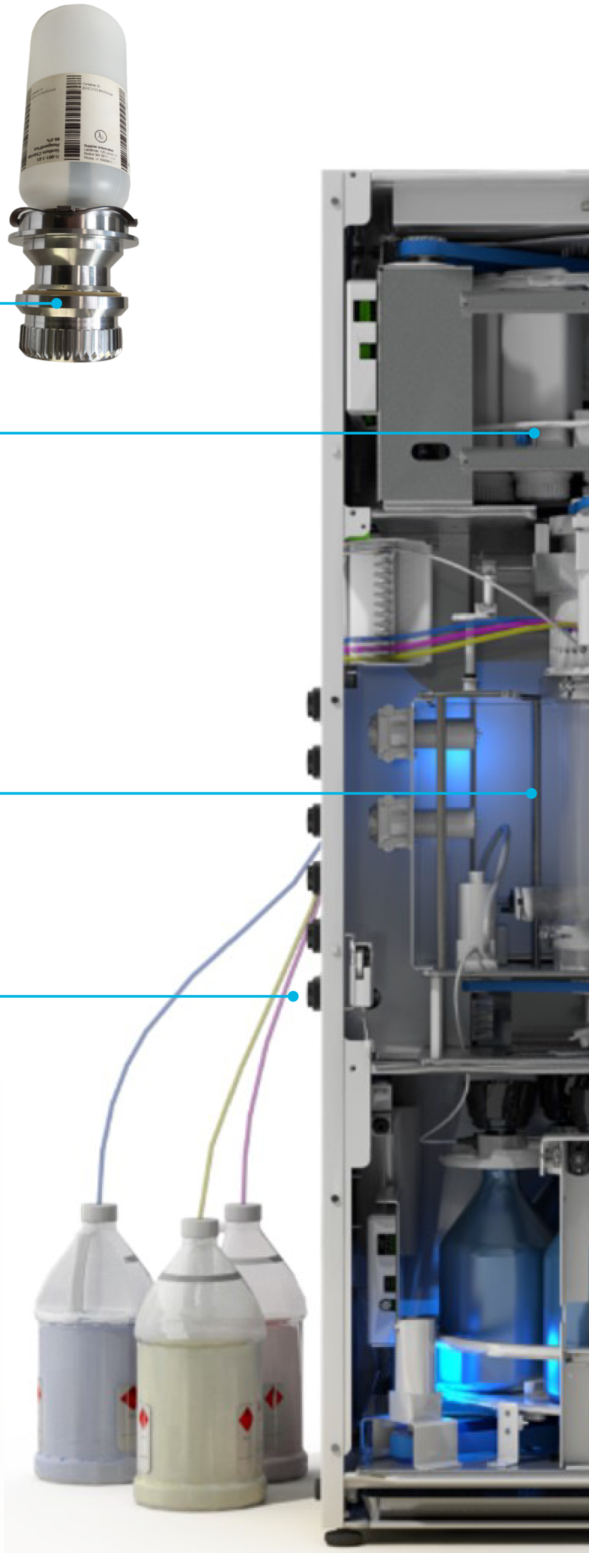
4 Bottles
1 / 2L each

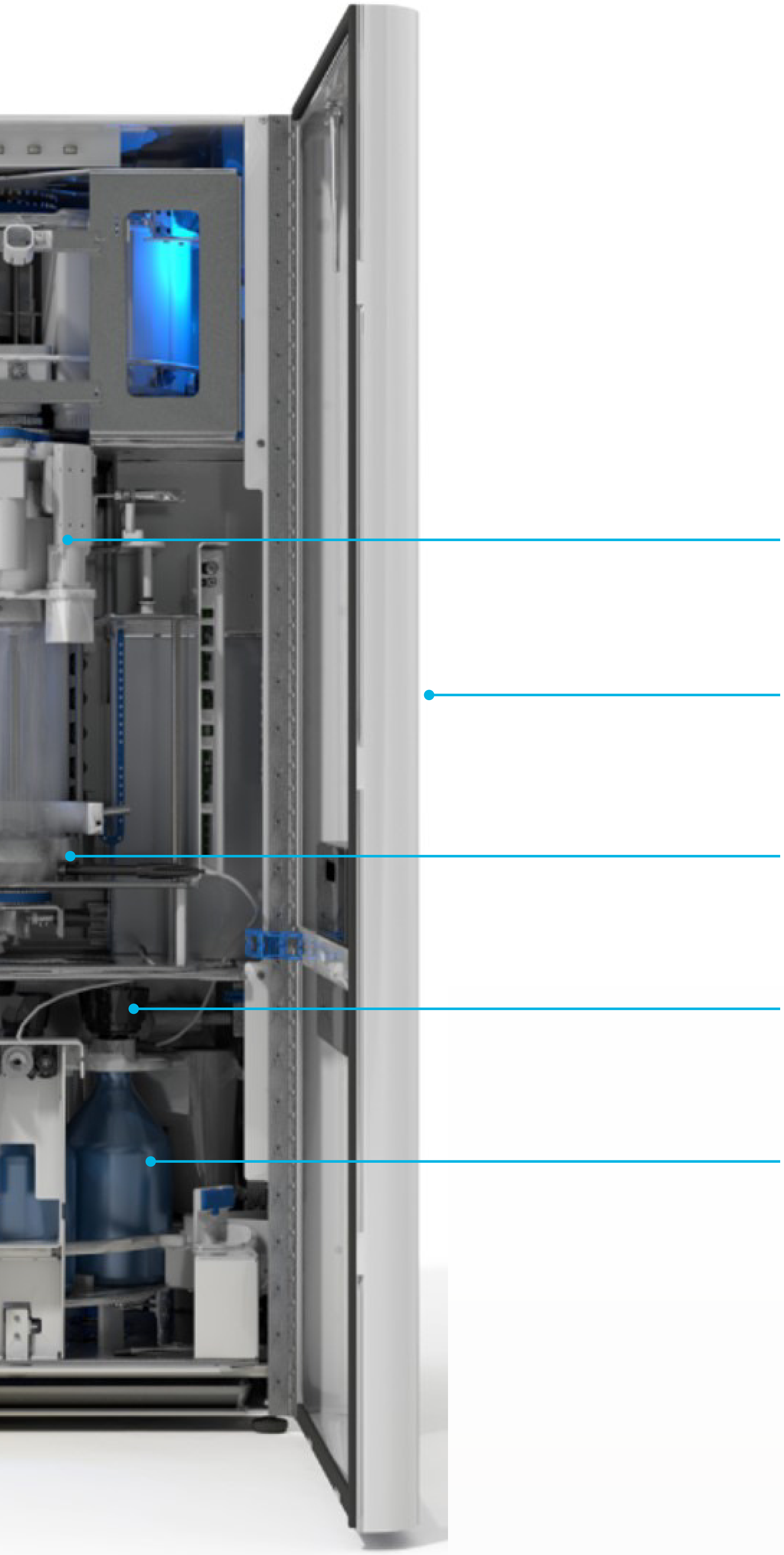
**Productivity, Efficiency**

**Consistency, Reproducibility**

**Traceability**

**Safety**

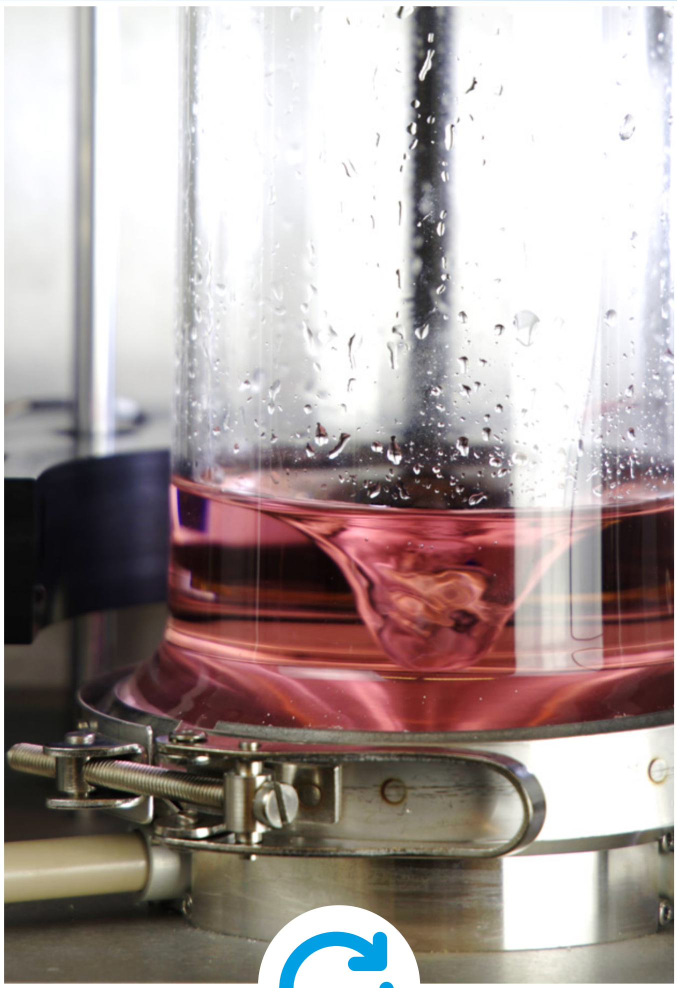

Solid Dosing Head
Solid Container Carousel
Central Mixing Chamber
Liquid chemical Inlets & Pumps




Label Printer

# Time Saving / Increased Throughput

From chemicals to validated buffers, the bufferPrep system automates the entire process. The integrated barcode reader checks the correctness and validity of solid chemicals. Tap water can be purified by the system and the pH probe calibration is fully automated. Prepared buffer solutions are tested by pH, conductivity, volume and temperature. If the tolerances were not met, the system can independently perform iterative pH adjustment steps. Verified buffers are transferred to the final bottles with or without filtration before collection.

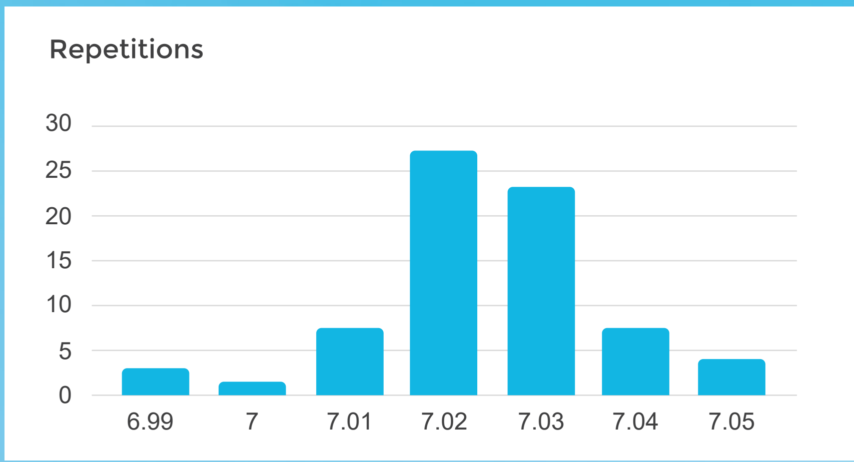


**Auto Cleaning & Auto pH Calibration**

- Verification of Chemicals
- Liquid & Solid Dosing
- Stirring
- Validation
- Bottling, with or without vacuum filtration
- Email notification
- Collection & Labelling

> **Standardized and documented Output for reproducible Processes and Analysis**

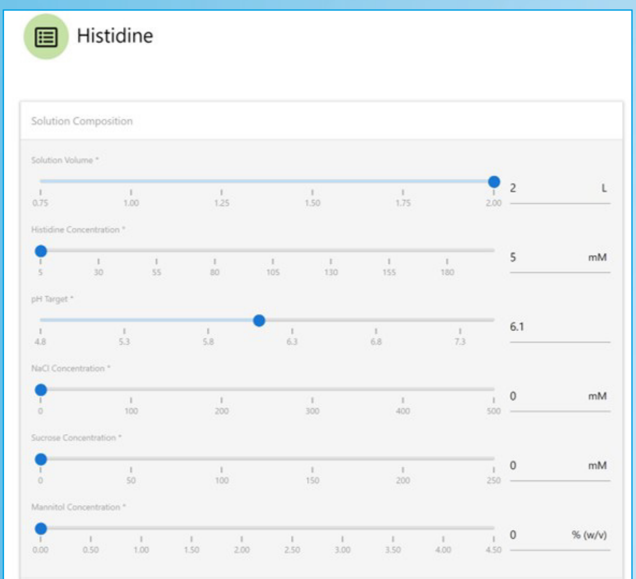
# Consistent Buffer Quality - Day in, Day out

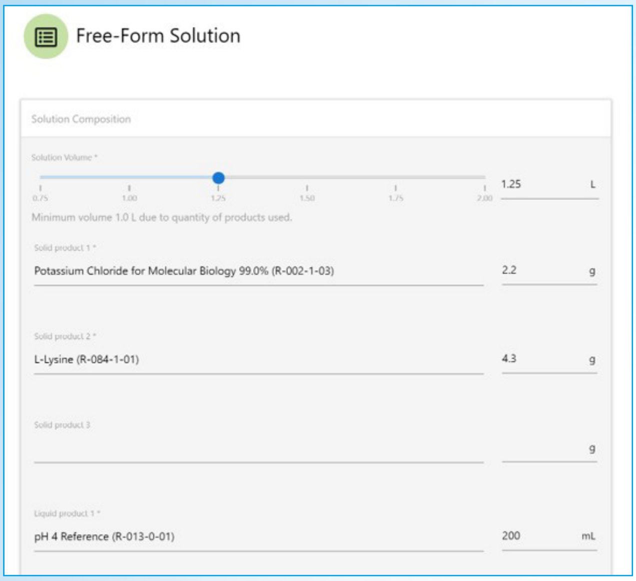



**Customer Recipe:** pH 7.025, 4-sigma confidence of 0.046 accuracy (99.99%)

# Buffer preparation without pH adjustment

Use platform orders such as Tris, Histidines, Phosphates, Citrates or Acetates, which utilitse predictive models to reach a target pH. This avoids time consuming buffer development and pH adjustment steps. If you want to define recipes the traditional way, the Free-Form recipe editor gives you the flexibility to do so.



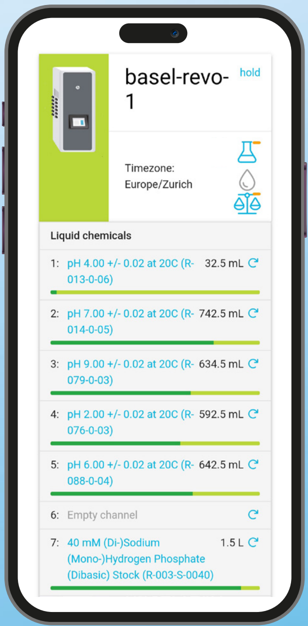
## Order Buffers from any Web-enabled Device - Simple and Quick

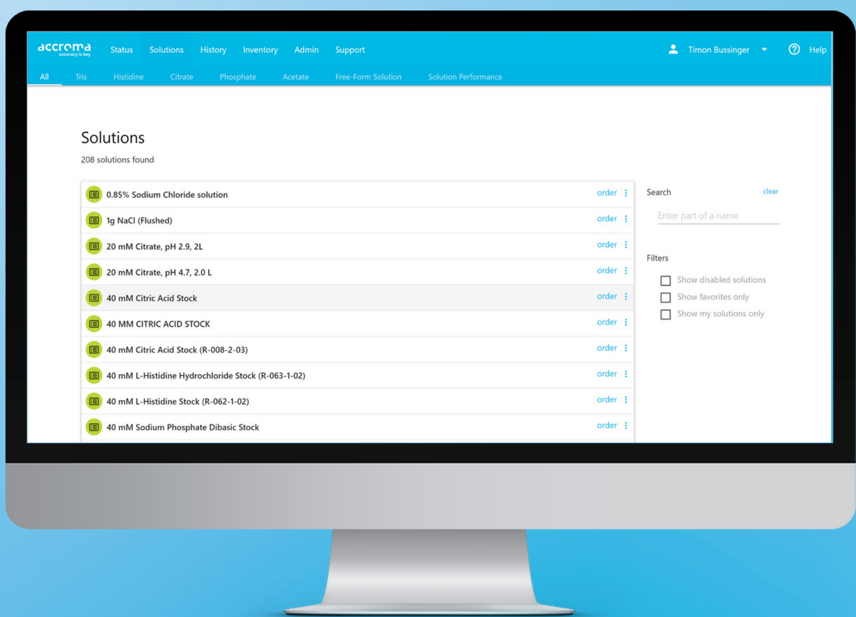
The systems are controlled through a web browser accessible from any connected device to guarantee efficiency, ease of use, scalability, security and direct connectivity for the end users. Instruments can be interconnected across the same company so they can be used by different groups while all your data is stored at one place.

Choose a recipe

Define quantity and collection time

Order




## Track Chemicals Level and receive instant Remote Support

When chemicals run low, users are notified and prompted to refill. If desired, the chemicals are automatically ordered and shipped to you. If you need application or technical support, we can help you with our cost-effective remote service.

# Service that supports you!

Choose from different service levels (Instrument Care Plans) to run your instruments with highest uptime and efficiency. You define the frequency of maintenance and qualification, the level of cost coverage in case of repair and whether the inventory management of chemicals is outsourced to us. We also provide support in the development of new recipes and the onboarding of new chemicals.

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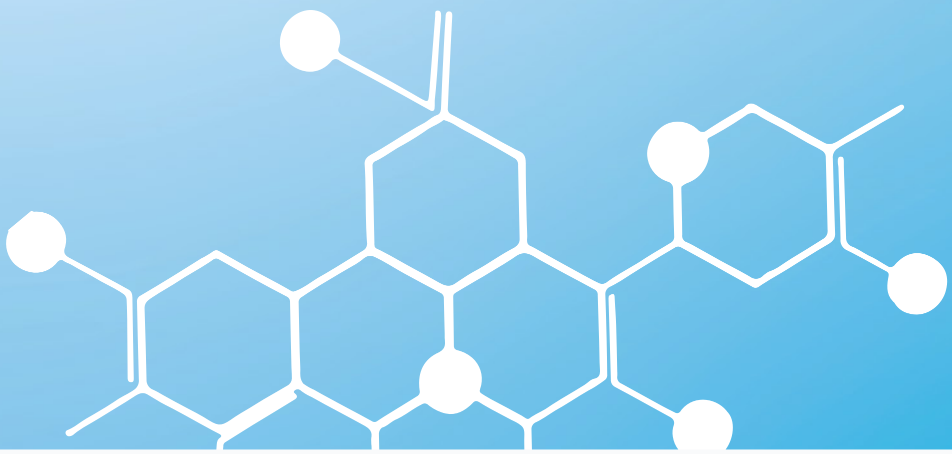
# accromate

# ~~Automate~~ your buffer preparation!

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