The Problem with PipTaz

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Meet the Team

- Pharmacy Technical Services
- Wrexham Maelor Hospital
- What do we do
  - Quality Assurance
  - Quality Control
  - Microbiology
  - Research and Development

What is PipTaz?

- Piperacillin/ Tazobactam
  - Tazocin

- Combination antibiotic
- Broad spectrum
- High usage in A&E
- 2nd highest used IV antibiotic in England
  - 5,895,475 doses in 2019 – 2020
  - In BCUHB approx. 130,000 each year

The Problem

- Dissolution time – each dose takes approx. 15 minutes to prepare
- It doesn't dissolve easily and requires constant shaking
- Each patient requires 3 doses per day – so 45 minutes of a nurses day
- Across BCUHB that's 1,950,000 minutes of nursing time shaking PipTaz doses. That's a full time job for 4 nurses.

- We could use Technical Services
- Low capacity
- Slow process

The Proposed Solution

- SmartPak
- 50 doses in one bag
- Been available in Europe for 20 years
  - Mainly used in the Netherlands
- Pharmaceutical Intermediate
  - Licensing
  - Import
- Can we use this in Technical Services?

How do we make this happen?

- Can we even import this to the UK?
- Is it what the manufacturer says?
  - Is it safe?
  - Are they reputable?
- Does it do what the manufacturer says it does?
- Can we develop a manufacturing method?
  - Saves time
  - Reliable
  - Repeatable

Step 1: Getting the product to the UK

- Check our licenses and what we are legally allowed to do
  - MHRA specials license in Wrexham
  - Allows specials manufacturers to import ‘special’ pharmaceutical products
  - Confirmed the product is an intermediate not API with MHRA

Step 2: Is the manufacturer reputable?

- Audit
- Collaboration with:
  - AddedPharma
  - BCUHB
  - NHFT
  - Independent Contracted GMP Auditor
- Audit outcome successful
- Action plan received Dec 2026

Step 3: Can we develop a manufacturing method?

- Discussion with AddedPharma
- Analytical development
- Consumable determination
- Process validation
- Stability studies
- Sterility studies

Step 3: Can we develop a manufacturing method?

- 81% reduction in production time when compared to aseptic manufacture
- 94% reduction in production time when compared to ward manufacture
- 74% reduction in the number of aseptic manipulations when compared to vials
- 21 days chemical stability when stored at 5°C ± 3°C
- 7 days chemical stability when stored at 25°C / 60% Relative Humidity

What next?

- Start manufacture
  - Contract being agreed upon
  - Staff training
  - Good timing with other projects
- Knowledge sharing
  - RPS conference 2025
  - European Association of Hospital Pharmacy 2026

[(ID: 52) Modernising aseptic workflow: insourcing the semi-automated manufacture of piperacillin/tazobactam ready to administer doses to pharmacy technical services | International Journal of Pharmacy Practice | Oxford Academic]

Get in Touch

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