

A thick blue wavy line that spans the width of the slide, starting from the left edge and curving upwards towards the right.

Dried Plasma and Dried Cryoprecipitate

By Rhian Edwards

Clinical need for dried plasma - Military



Blood and Transplant



- Most deaths occur within 60 minutes due to
 - Catastrophic injury
 - Head injury
 - Major haemorrhage (MH)
- 20% injured casualties will need blood (approx. 8 units each)
- 10K units' plasma per month - NATO
- Early administration of plasma in addition to red cells reduces mortality from MH
- Blood far forward program aims to provide blood within 30 minutes
- Difficult for plasma due to freeze-thawing/cold chain requirements in austere environments
- Currently source LyoPlas from Germany/FlyP from French Military, concerns around sufficiency, resilience, glass bottles not ideal
- Inequity of treatment – those who get plasma or don't



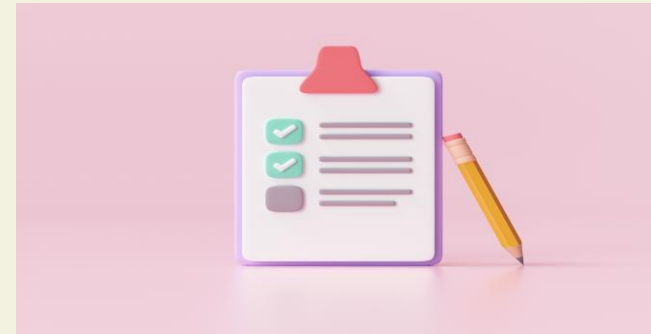
Caring Expert Quality

Civilian need for Dried Plasma - Hospitals

(two surveys distributed Nov 2021)

Transfusion Laboratory Managers (n=63)

- **92%** expect that DP stocks **would** be issued and controlled by the Hospital Transfusion Laboratory
- **60%** believe that DP will reduce overall plasma wastage
- **30%** would stop pre-thawing FFP if DP was available



Clinicians (n=76)

- **96%** believe reconstitution of DP closer to the theatre/ward would facilitate earlier transfusion
- If access to DP was limited, clinicians would prioritise use in:
 - *Emergency / Trauma (91%)*
 - *Maternity (54%)*
- **81%** of clinicians would consider moving **all** plasma to DP (Universal or blood group specific)
- **80%** willing to pay more for a unit of Dried Plasma
- **83%** willing to pay more for a unit of Dried Cryoprecipitate

Spray Dried Plasma

- Powdered FFP (spray dried not freeze dried)
- NHSBT sourced plasma (UK standard for donor screening etc) and manufactured in UK
- Will be an MHRA regulated Blood Component
- Single donor – not pooled or pathogen inactivated
- All coag factors within +/- 20% pre to post drying, but similar TEGs / coag function
- Can be stored in fridge (2 years) or at room temperature (1 year)
- Reconstitutes in <5 minutes with sterile water for injection
- A great solution for MHP box 1!



Remove water
content



Expert Quality

1. Prep



2. Dry



3. Seal



4. Overwrap



- Spray dry technology
- 1 unit of plasma dried in approx. 30mins



Ministry
of Defence



Blood and Transplant

Caring Expert Quality

	LyoPlas	FlyP	UK SDP
Manufacture Country	Germany	France	UK
Process	Lyo	Lyo	SDP
Licence	Off-label	Off-label	MHRA
Reconstitution time	10 mins	5 mins	~ 7 mins
Storage	Up to 25°C – 15 months	Up to 25°C – 24 months	TBC
Recon Storage	Unknown	Unknown	Will be known
Donor profile	Single donor	Pooled – 11	Single donor
Container	Glass vial	Glass vial	Plastic envelope
Reconstitution Fluid	200 mls SWFI	200 mls SWFI	200 mls SWFI
ABO compatibility	Group – specific	Universal	TBC - likely gp A

Spray Dried Cryoprecipitate



Blood and Transplant

- Currently at development stage
- Will be Spray Dried, pooled UK Cryo
- Will not need freezer storage
- Easily reconstituted in minutes
- Superior haemostasis compared with Fibrinogen – concentrate
- Will be a fibrinogen-rich resuscitation fluid perfect for Obstetric Haemorrhage / Major trauma
- Significant potential to decrease UK Cryo waste (currently 20% for AB)