University of Colorado Hemophilia & Thrombosis Center Pharmacy: PROTHROMBIN COMPLEX CONCENTRATE

Hemophilia and Thrombosis Center
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

	PROFILNINE- SD®	BEBULIN™	KCENTRA®	FEIBA-NF ™
MANUFACTURER	GRIFOLS	SHIRE (Formerly Baxtalta)	CSL BEHRING	SHIRE (formerly Baxalta)
U.S. LICENSURE DATE	2010	1970	2013	1986
CLASSIFICATION	Non-activated Factor IX Prothrombin Complex	Non-activated Factor IX Prothrombin Complex	Non-activated four-factor Prothrombin Complex Concentrate	ACTIVATED PCC (Prothrombin Concentrate Complex)
SOURCE MATERIAL	Pooled human plasma	Pooled human plasma	Pooled human plasma	Pooled human plasma
CONTENTS	FACTOR IX, VIT K dependent clotting factors	FACTOR IX, VIT K dependent clotting factors	FACTOR II, VII, IX, X, and protein C and S	Factors II, IX, and X and mainly activated factor VII. It contains approximately equal units of factor VIII inhibitor bypassing activity and prothrombin complex factors. Anti-Inhibitor Coagulant Complex.
Units of FII	≤ 225 IU/mL (No more than 150 units/100 Factor IX units)	24-38 IU/mL	380-800 units FII/500 units of Kcentra	Non-activated form
Units of FVII	≤ 52.5 IU/mL (No more than 35 units/100 Factor IX units)	10-240 IU/mL	200-500 units FII/500 units of Kcentra	Activated form
Units of FIX	100-150 IU/mL	10-60 IU/mL	400-620 units FII/500 units of Kcentra	Non-activated form
Units of FX	≤ 150 IU/mL (No more than 100 units/100 Factor IX units)	24-38 IU/mL	500-1020 units FII/500 units of Kcentra	Non-activated form
Units of Protein C			420-820 units FII/500 units of Kcentra	
Units of Protein S			240-680 units FII/500 units of Kcentra	
PROTEIN PURIFICATION METHODS	DEAE cellulose adsorption chromatography	DEAE-Sephadex® absorption chromatography	Ion exchange chromatography	Ion exchange chromatography, ultrafiltration
VIRAL INACTIVATION METHODS	Solvent/detergent, nanofiltration	Nanofiltration, vapor heated	Nanofiltration, vapor heated	Vapor Heat; nanofiltration DEAE-Sephadex adsorption
INACTIVE INGREDIENTS	NaCl, polysorbate 80, tri(n-butyl) phosphate, citric acid monohydrate, disodium phosphate dehydrate, benzalkonium chloride, purified water	Heparin, sodium citrate, NaCl	NaCl, citric acid monohydrate, disodium phosphate dehydrate, benzalkonium chloride, purified water	Trisodium citrate, NaCl
MEAN HALF LIFE	24.68 ± 8.29 hours	19.97 ± 8.24 hours	FII= 60.4 hours FVII=5 hours FIX=42.4 hours FX=31.8 hours Protein C=49.6 hours Protein S=50.4 hours	FII: ~72 Hrs
BOX CONTENTS	Diluent: 5 mL (500 IU), 10 mL (1000 IU, 1500 IU) Sterile Water for Injection, Mix2Vial transfer	Diluent: 20 mL (all sizes) Sterile Water for Injection, transfer needle, filter needle	Diluent 20 mL (500 IU), 40 mL (1000 IU) Sterile Water for Injection, Mix2Vial filter transfer set, alcohol swab	Diluent: 10 mL (500), 20 mL (1000), 50 mL (2500) Sterile Water for Injection, BAXJECT II high flow needleless transfer device
ASSAYS AVAILABLE	500 IU, 1000 IU, 1500 IU	500-700 IU	500 IU, 1000 IU	500 IU, 1000 IU, 2000 IU

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INFUSION RATE	≤10 mL/minute Use within 3 hours of reconstitution. Do not refrigerate after reconstitution.	Not to exceed 2 mL/minute Use within 3 hours of reconstitution. Do not refrigerate after reconstitution.	Infuse at a rate of 0.12/mL/kg/min (~ 3 units/kg/min), up to a maximum rate of 8.4 mL/min (~units/min) Use within 4 hours of reconstitution.	2 units/kg/minute, A syringe pump may be used to control the rate of administration. Administer within 3 hours of reconstitution.
STORAGE REQUIREMENTS	▫Store at refrigerated temperature 2°C to 8°C (35°F to 46°) until expiration. ▫ May be stored at room temperature ≤ 30°C (86°F) for up to 3 months. ▫Do not freeze.	▫Store at refrigerated temperature 2°C to 8°C (35°F to 46°) until expiration. ▫Do not freeze.	▫Store at refrigerated temperature 2°C to 25°C (36°F to 77°F) or until expiration. ▫Do not Freeze.	▫Store at room temperature ≤ 25°C (77°F). ▫Do not freeze. ▫ Store in the original package and protect from light.
DOSING GUIDELINES	**Body wt. (kg) x 1.0 IU/kg x Desired Increase in plasma factor IX (%) = Number of Factor IX in IU required** **NOTE: The amount of Profilnine required to establish hemostasis will vary with each patient and depends on the circumstances.**	**Body wt. (kg) x desired Factor IX increase (%) x 1.2 = Number of FIX in IU required** **Minor bleed (epistaxis, mouth bleed):** 25-35 units/kg/dose X 1 day **Moderate bleed (joint bleed, minor trauma)**: 50-65 units/kg kg/dose X 2 days or until adequate wound healing **Major bleed (severe trauma, severe hematoma):** 75-90 units/kg/dose every 2-3 days or until adequate wound healing. **NOTE: The response to treatment will vary from patient to patient. Exact dosage determination should be based on localization and extent of hemorrhage and the level of Factor IX to be achieved**.	**Dosage Required for Reversal of VKA Anticoagulation in Patients with acute major bleeding or need for an urgent surgery/invasive procedure:** **If Pre-treatment INR=2-<4** give 25 units/kg, NTE 2500 units **If Pre-treatment INR=4-6** give 35 units/kg, NTE 3500 units **If Pre-treatment INR=>6** give 50 units/kg, NTE 5000 units **Individualize Kcentra dosing based on the patient's current pre-dose International Normalized Ratio (INR) value, and body weight. Administer Vitamin K concurrently to patients receiving Kcentra.** -Measurement of INR prior to treatment and close to the time of dosing is important because coagulation factors may be unstable in patients with acute major bleeding or an urgent need for surgery and other invasive procedures. -Vitamin K is administered to maintain Vitamin K-dependent clotting factor levels once the effects of Kcentra have diminished. -The safety and effectiveness of repeat dosing have not been established and it is not recommended.	**Control and Prevention of bleeding**: 50-100 units/kg determined by the type of bleeding episode. **Perioperative Management**: 50-100 units/kg determined by the type of surgical intervention **Routine Prophylaxis:** 85 units/kg every other day •**Do not exceed a single dose of 100 units per kg body weight and a daily dose of 200 units per kg body due to increased risk of thromboembolic events.**

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FDA APPROVED INDICATIONS	For the prevention and control of bleeding in Factor IX deficient patients (hemophilia B)	For the prevention and control of bleeding in adults with Factor IX deficiency (hemophilia B)	Urgent reversal of acquired coagulation factor deficiency induced by vitamin K antagonist (warfarin) therapy in adults with acute major bleeding or need for urgent surgery/invasive procedure	For use in hemophilia A and B patients with inhibitors for: ☑Control and prevention of bleeding episodes ☑Perioperative management ☑Routine prophylaxis to prevent or reduce the frequency of bleeding episodes.
COMMENTS	▫Primary use for FIX deficient patient only. ▫Do not use in FVII deficient patients. ▫Does NOT contain heparin. ▫Monitor for thromboembolic complications during post-op period (DIC) ▫Each vial is labeled with the factor IX potency expressed in International Units (IU). Product contain natural rubber latex	▫Primary use for FIX deficient patient only. ▫Do not use in FVII deficient patients. ▫Contains ≤0.15 IU heparin per IU Factor. ▫Monitor for thromboembolic events (DVT, PE, thrombotic stroke, DIC) ▫ Bebulin is standardized in terms of Factor IX content and each vial is labeled for the Factor IX content indicated in International Units (IU).	▫Kcentra potency (units) is defined by Factor IX content . **BLACK BOX WARNING**: ARTERIAL AND VENOUS THROMBOEMBOLIC COMPLICATIONS	**WARNING: THROMBOEMBOLIC EVENTS** Thromboembolic events have been reported during post-marketing surveillance, particularly following the administration of high doses and /or in patients with thrombotic risk factors. Monitor patients receiving FEIBA for signs and symptoms of thromboembolic events. **PRECAUTION**: FEIBA can cause thromboembolic events following doses above 200 units/kg/day and in patients with thrombotic risk. Monitor patients for signs and symptoms of thromboembolic events. MASAC Recommendations: Use of aPCC for breakthrough bleed treatment for patients on HEMLIBRA should be avoided if possible, and rFVIIa should be the first option used to treat. If aPCC is used, it should be limited to no more than 50 IU//kg as an initial dose and not to exceed 100 IU/kg/day. Contains 1-6 units of factor VIII coagulant antigen (FVIII C:Ag) per mL.

NOTE: Recombinant technology may be the ONLY product of choice for patients of Jehovah's Witnesses faith.

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MEDICATION CHART DISCLAIMER

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