ONE-STOP GUIDE TO SURGICAL SKIN PREPS

				EFFICACY						EFFICIENCY			COMPATIBILITY		PRODUCT INFORMATION							
				*In Vitro Testing***		*In Vivo Testing***															
Product	**Manufacturer**	**Uses**	**FDA Category***	**Kill Rate (%)**	**Time to Achieve Kill Rate (min)**	**Meet FDA log Reduction Standards?**	**Persistence**	**Inactivated or Weakened by any Known Substances?**	**Water Soluble?**	**# Application Steps**	**Required Application/ Contact Time**	**Required Drying Time On Skin**	**Compatible with all Gloves?**	**Irritating to Mucous Membranes/ Eyes?**	**Active Ingredient(s)**	**Stain?**	**Available Applicators**	**Sizes**	**Flammable?**	**Removal Procedure**	**Primary Benefits (manufacturer's claims)**	**Other Considerations**
Actiprep	Healthpoint www.healthpoint.com	Patient pre-op skin prep. Not for use near eyes, in ears or on mucous membranes.	I	>99.9	15 seconds	Yes	2 log reductions maintained at 24 hours	None	Yes	One step	Begins killing bacteria on contact	<2 minutes	Yes	Yes	Alcohol 73%	Yes. Basic soap removes the stain.	No (bulk solution)	2- and 16-oz bottles	Yes, while wet	Soap and water	CHG- and iodine-free. Exceeds FDA requirements when used alone. When used as a 'prep system' that includes a pre-op shower with Triseptin body wash, prep site maintains significant microbial reductions 48 hrs post-op. Alcohol-based, fast acting.	Contains a film former to aid drape adherence.
ChloraPrep	Medi-Flex www.medi-flex.com	Patient pre-op skin prep. Not for use near eyes, in ears or on mucous membranes.	NDA	99.99	15 seconds	Yes	At least 48 hours	Some lotions containing lecithin	Yes	One step	30 seconds (dry sites), 2 minutes (wet sites)	Dry sites: 30 seconds. Wet sites: 1 minute.	Yes	Yes	Chlorhexidine gluconate 2%/ isopropyl alcohol 70%	No	Unit dose applicators	3.0- and 10.5-mL dosed applicators; 0.67 mL SEPP & 1.5mL Frepp applicators for small sites	Yes, while wet	Intended to be left on skin	Fast acting, broad spectrum, persistent.	Chlorhexidine 2% is preferred for preventing catheter-related bloodstream infections (CDC Guidelines Category IA).
Povidone-Iodine Prep Solutions	Medline www.medline.com	Patient pre-op skin prep. Not for use near eyes, in ears or on mucous membranes.	I	>99.9	Within 60 seconds	Not Available	Not Available (Some persistence due to film-forming capability)	High concentrations of organics and non-organic ions (chlorine and other halogens, for example)	Yes	One step (optional pre-cleansing)	3 to 5 minutes, until dry	Generally 2 to 5 minutes	Yes	Yes	Povidone iodine 10% (1% available iodine)	Yes but can be removed	Saturated rayon prep pad, rayon swabstick, polyurethane sponge stick, polyurethane wing sponge	4-oz, 8-oz, pint, quart, gallon bottles	No	70% isopropyl alcohol- or 1% sodium thiosulfate-impregnated gauze or cloth	Broad spectrum. Effective against gram (+) and gram (-) bacteria, yeasts and molds. Virucidal.	
Betadine Solution	Purdue Products L.P. www.purduepharma.com	Patient pre-op skin prep.	I	100	3 minutes (89% at 15 seconds)	Yes	6 to 8 hours	Blood, pus, proteins	Yes	Traditional two-step scrub and paint operation	At least 2 minutes	None. Air dry if desired.	Not Available	No/5% PVP-I solution can be used in the eye	Povidone-iodine 10% (1% available iodine)	Yes	No	1/2-, 4-, 8-, 16-, 32-oz; 1 gallon	No	Wash off with water or wipe with alcohol pad	Proven effective. Reduces bacteria that can potentially cause skin and wound infection.	Avoid pooling beneath the patient. Prolonged exposure may cause skin irritation.
Hibiclens	Regent Medical www.us.regentweb.net	Patient pre-op skin prep. Not for use near eyes, in ears or on mucous membranes.	NDA	For *S. epidermidis*: 99.375% at 20 sec. 99.96% at 1 minute^	See prior column	Yes	At least 6 hours	Anionic compounds	Yes	Two steps (repeat application required)	2 minutes per application	None. Dry with sterile towel.	Yes	Yes	Chlorhexidine gluconate (CHG) 4%	Will stain brown if laundered with bleach-containing detergents	No	4-, 8-, 16-, 32-oz; 1 gallon	No	None necessary	Broad spectrum, persistent microbial kill. A "gold standard" of antiseptics.	
Triadine and Triad Plus PVP-I 10% Prep Solutions	Triad Disposables www.triad-group.net	Patient pre-op skin prep. Safe for wounds and mucous membranes.	I	Most organisms killed within 2 minutes	2 minutes	Yes	Some persistence (<1 day)	Reducing agents such as sodium thiosulfate; also weakened by blood and organic matter	Yes	Three steps: After cleaning skin, apply prep, repeat twice	1 to 5 minutes	Complete drying not required	Yes	No/No	Povidone-iodine 10% (1% available iodine)	Does not stain skin (washes off with water). May stain some clothes. Lemon juice followed by immediate washing may remove persistent stains.	Pre-saturated swabsticks, sponge sticks, prep pads	2-, 4-, 8-, 16-, 32-oz; 1 gallon	No	Sterile gauze/ sterile water	Flip-top bottles have easy-open wing-tab safety seal. Triad Plus solutions/gels are designed for procedural kit and tray manufacturers. Bottles can withstand deep vacuum EtO cycles without leaking.	

*Prep product categories: Category I: Generally recognized as safe and effective, not misbranded; Category II: Not generally recognized as safe and effective or misbranded; Category III: Available data insufficient to classify as safe and effective, further testing required. NDA: New Drug Application.
**Per FDA's proposed standards in the Tentative Final Monograph: "Kill rate" is the % of a standardized collection of common pathogens and their clinical isolates killed after prep application. The "log reduction standards" measure how well the prep reduces the microbial load on the skin. FDA suggests reductions of up to 2 log^{10}/cm^2 on dry skin sites (abdomen) and up to 3 log^{10}/cm^2 on moist sites (inguinal area) within 10 minutes of prep application. According to the FDA proposal, a product is "persistent" when microbial skin counts stay below baseline for 6 hours post-prep.
^Tested on a weaker (0.05%) CHG formulation than that in the prep product (4%).

Outpatient Surgery