

DRAFT FOR REVIEW — Not Doctor-approved for training. VERIFY items must be cleared before competency use.



IN-HOUSE LABORATORY

Cypress & Katy, TX

Document ID: SOP-LAB-070

Version 0.1 DRAFT | Target effective 09/10/2026

Surgical Guides

SprintRay Surgical Guide 3 / Precision Guide — Lab Manufacturing Procedure

Smile Avenue Family Dentistry — In-House Laboratory

SprintRay Surgical Guide 3 (primary) / Precision Guide (Pro 2-only fork) — Lab Manufacturing Procedure

Document ID	SOP-LAB-070
Version	0.1 DRAFT
Effective (target)	09/10/2026
Owner	Lab Technician (process owner)
Status	DRAFT FOR REVIEW

Start: Case received in Medit Lab with scan QC

End: Guide bagged and logged in SEAZONA for outbound delivery

1. Purpose

This procedure standardizes in-house manufacturing of SprintRay surgical guides — **Surgical Guide 3** as the primary resin path, with a documented **Precision Guide** fork for Pro 2-only cases — so every guide meets the same quality, safety, and traceability standard before leaving the lab.

2. Scope

In scope: Medit Lab intake → scan QC → design (VERIFY path) → RayWare / Pro 2 print → ProWash S → NanoCure → finish → lab clean → bag & SEAZONA. Sleeve insertion and autoclave sterilization may be completed in-lab per IFU when practice policy requires (**VERIFY** who autoclaves — lab vs clinical).

Out of scope: Chairside scanning / CBCT planning technique; surgical placement; patient delivery; non-SprintRay printers.

3. Roles

Role	Responsibility
Clinical Assistant / Office	Sends case via Medit Lab; receives bagged guide
Lab Technician	Scan QC; design approve; manufacture; finish; bag; SEAZONA; sleeve/autoclave if assigned
Trainer / Lead Lab Technician	Competency observation and sign-off
Doctor	Indication, implant plan approval, surgery, remake authorization

4. Practice Configuration

#	Item	Smile Avenue setting
1	Printer	Pro 2 only
2	Primary resin	Surgical Guide 3
3	Fork resin	Precision Guide — Pro 2 only (IFU-validated solely on Pro 2 + NanoCure)
4	Cure unit	NanoCure — Surgical Guide 3 or Precision Guide exact profile (do not invent minutes)
5	Case intake	Medit Lab
6	Design	VERIFY — outside CAD or SprintRay Cloud Design per IFU
7	Wash	ProWash S — IPA ≥ 91% — Surgical Guide 3: standard preprogrammed cycle; Precision Guide: Standard Multi-Cycle 3/3/3
8	Sterilization (IFU)	Insert sleeves → autoclave 5 min at 134 °C ; Precision Guide also: dry 15 min at 134 °C . VERIFY whether lab or clinical performs autoclave.
9	Design approval before print	Lab Technician
10	Case log	SEAZONA

5. Safety

- Treat uncured Surgical Guide 3 / Precision Guide as sensitizers/hazardous. Ventilate; PPE (nitrile, eyewear, gown, face protection).
- Do not place incompletely cured resin in the mouth. Do not bag under-cured guides.
- Do not substitute non-validated printers/washers/cure units.
- Cure waste resin fully before disposal. Do not use expired resin.
- Yellowish color after cure (Surgical Guide 3) may clear during sterilization — do not scrap solely for post-cure yellowing.

6. Materials & Equipment

Resins

Resin	When
SprintRay Surgical Guide 3	Primary Smile Avenue path
SprintRay Precision Guide	Fork when Rx specifies Precision Guide (Pro 2-only)

Also: IPA $\geq$ 91%; surgical guide sleeves per implant system (**VERIFY** sleeve inventory / Rx).

Equipment stack

Step	System
Intake	Medit Lab
Design	VERIFY — outside CAD or SprintRay Cloud Design
Nest / print	RayWare / Dashboard Print Setup → Pro 2
Wash	ProWash S
Cure	NanoCure — exact resin profile
Sterilize	Autoclave per IFU (VERIFY ownership)
Case log	SEAZONA

Design QC

Confirm sleeve holes, seating, and plan match approved surgical Rx; STL labeled; correct resin family selected.

7. Process Controls

Gate	Do not proceed if	Proceed when
Intake	Case missing / unreadable	Case open with ID / Rx / plan
Scan QC	Inadequate anatomy / wrong files	Scans usable
Resin fork	Precision Guide queued off Pro 2	Surgical Guide 3 or Precision Guide on Pro 2
Design	Not Lab Technician–approved	QC-A pass
Resin	Expired / wrong family	In-date correct resin; shaken 1 min
Pre-cure	Part wet	Fully dry
Cure	Wrong profile / invented times	Exact NanoCure profile complete
Outbound	Failed QC-E; not bagged/logged	Bagged + SEAZONA ready

8. Procedure

A. Intake & scan QC

1. Open case in **Medit Lab**.
2. Verify ID, arch, implant sites, resin (Surgical Guide 3 vs Precision Guide), sleeve system, due date.
3. Scan QC: required scans/models usable; no critical holes or wrong-patient files.
4. **QC-SCAN**: Pass → continue. Fail → return to office.

B. Design (VERIFY path)

5. Import into practice design path (**VERIFY**: outside CAD or SprintRay Cloud Design).
6. Design/receive surgical guide STL per approved plan.
7. Export STL; Lab Technician **approves**.
QC-A: Holes/sleeve positions match plan; seating OK; correct resin noted; STL labeled. Fail → redesign.

C. Nest (RayWare / Print Setup)

8. Import approved STL.
9. Select appliance type Surgical Guide; printer **Pro 2**.
10. Select **Surgical Guide 3** or **Precision Guide** per Rx.
11. Orientation: intaglio facing **away**; layer thickness typically **100 µm**; default / auto supports (Precision Guide: Dashboard Print Setup auto-orient).
12. Queue to Pro 2 only.

D. Print

13. Shake resin **1 minute**; pour to min fill; record lot; assign material; clean platform; start print.
14. **QC-B**: Fully formed; sleeve holes open/usable; no delamination. Fail → remake.

E. Wash & dry

15. **Surgical Guide 3**: ProWash S standard preprogrammed cycle, IPA ≥ 91%.
Precision Guide: ProWash S Standard Multi-Cycle 3/3/3.
16. Fully dry.
QC-C: Clean + dry.

F. Post-cure

17. NanoCure: select **Surgical Guide 3** or **Precision Guide** exact profile. Do not invent times.
18. Remove supports (flush cutter / diamond disc); smooth with Scotch-Brite / Fuzzies. Optional pumice/compound polish.
QC-D: Fully cured; geometry intact.

G. Finish, sleeves, sterilize (VERIFY ownership), bag

19. Lab clean with soap + brush + warm water; dry.
20. Insert surgical guide sleeves into drill holes when assigned to lab.
21. If lab autoclaves: **5 min at 134 °C** (Surgical Guide 3); Precision Guide: **5 min at 134 °C** then dry **15 min at 134 °C**. Note expected color change after autoclave.

!2. If clinical autoclaves: bag as clean finished guide with sleeves status noted in SEAZONA; do not claim sterile unless autoclaved.

!3. Label, bag, SEAZONA bagged / outbound.

QC-E: Finish OK; cleaned; bagged; logged; sterilization status documented.

End of SOP-LAB-070. Surgery and clinical delivery are outside this procedure.

Precision Guide fork summary (Pro 2-only)

Item	Precision Guide
Printer	Pro 2 only (IFU)
Wash	3/3/3 multi-cycle
Cure	NanoCure only (IFU for Pro 2)
Autoclave	5 min @ 134 °C + 15 min dry @ 134 °C

9. Case Log (SEAZONA)

Field	Entry
Date	
Patient / case ID	
Medit Lab reference	
Resin	☐ Surgical Guide 3 ☐ Precision Guide
Scan QC	☐ Pass ☐ Fail
Design approved by (Lab Technician)	
Resin lot	
Printer	Pro 2 ☐
NanoCure profile	Surgical Guide 3 ☐ / Precision Guide ☐
Sleeves inserted	☐ Yes ☐ No — who: ____
Autoclave	☐ Lab ☐ Clinical ☐ N/A — cycle logged: ____
QC-SCAN + A–E	☐ Yes
Bagged for outbound	☐ Yes — time __

10. Quality Checkpoints

ID	When	Pass	Fail action
QC-SCAN	Intake	Scans usable	Return to office
QC-A	Pre-print	Plan match + approved	Redesign
QC-B	Post-print	Complete + holes OK	Remake
QC-C	Post-wash	Clean + dry	Re-wash/dry
QC-D	Post-cure	Cured + intact	Remake / salvage
QC-E	Outbound	Finish + bag + SEAZONA + sterilize status	Hold

11. Remake Criteria

Finding	Action
Failed scan QC	Do not manufacture
Incomplete print / closed sleeve holes / delamination	Remake
Precision Guide off Pro 2	Stop; remake on Pro 2
Under-cured / wrong profile	Hold; correct or remake
Crack after autoclave	Remake
Unsure	Escalate to Doctor / lab lead

12. Competency

Requirement	Sign-off
Read SOP-LAB-070	Tech _ Date ____
Demonstrates both Surgical Guide 3 and Precision Guide fork controls	Trainer _ Date ____
Completes 3 observed cases to bagged outbound	1. ____ 2. ____ 3. ____
Trainer attests ready	Trainer _ Date ____
Lab lead authorizes unsupervised production	_ Date ____

13. Troubleshooting & Escalation

Problem	Action
Bad scans / missing plan	Return to office / Doctor
Yellow after cure (SG3)	Expected; may clear after sterilization
Soft after cure	Confirm dry + correct NanoCure profile
Precision Guide requested on non-Pro 2	Stop; use Pro 2 or switch to Surgical Guide 3 per Doctor

SprintRay Support: 1-800-914-8004.

14. References

- SprintRay Surgical Guide 3 IFU-002_8 (effective 06/25/2024)
- SprintRay Precision Guide IFU-028 Revision 3 (effective 06/11/2026)
- Local IFU archive: `SurgGuide3.txt` , `PrecisionGuide.txt`

Smile Avenue Family Dentistry — In-House Laboratory · Internal use only

SOP-LAB-070 DRAFT FOR REVIEW · Target effective 09/10/2026 · Supersedes prior draft revisions

Review annually or when SprintRay IFU / equipment changes. Confirm all VERIFY items before training use.

Smile Avenue Family Dentistry — In-House Lab · SOP-LAB-070 · DRAFT FOR REVIEW · Internal use · Target effective 09/10/2026