

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-100

Version 0.1 DRAFT | Target effective 09/10/2026

Sports Guards

SprintRay SportsGuard — Lab Manufacturing Procedure

Smile Avenue Family Dentistry — In-House Laboratory

SprintRay SportsGuard — Lab Manufacturing Procedure

Document ID	SOP-LAB-100
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: Sports guard bagged and logged in SEAZONA for outbound delivery

1. Purpose

This procedure standardizes in-house manufacturing of SprintRay SportsGuard athletic mouthguards so every case 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 → ProWash S (custom 3/5/3) → NanoCure → finish → lab clean → bag & SEAZONA.

Out of scope: Nightguards (SOP-LAB-020); chairside scanning; clinical delivery; non-SprintRay printers. SportsGuard IFU validates **Pro 2 only**.

3. Roles

Role	Responsibility
Clinical Assistant / Office	Sends case via Medit Lab; receives bagged guard
Lab Technician	Scan QC; design approve; manufacture; finish; bag; SEAZONA
Trainer / Lead Lab Technician	Competency observation and sign-off
Doctor	Indication, shade Rx, delivery, remake authorization

4. Practice Configuration

#	Item	Smile Avenue setting
1	Printer	Pro 2 only (IFU-validated)
2	Cure unit	NanoCure — SportsGuard preprogrammed profile (do not invent minutes)
3	Case intake	Medit Lab
4	Design	VERIFY — outside CAD or SprintRay Cloud Design; follow Appliance Design Guidelines
5	Wash	ProWash S — IPA ≥ 91% — Custom Multi-Cycle: 3 min wash / 5 min rinse / 3 min dry
6	Shades	Clear, red, blue — per Rx
7	Layer thickness	100 µm
8	Design approval before print	Lab Technician
9	Case log	SEAZONA

5. Safety

- Treat uncured SportsGuard as hazardous. PPE + ventilation.
- Do not bag under-cured appliances. Do not substitute non-Pro 2 printers for this resin.
- Cure waste resin fully. Do not use expired resin.

6. Materials & Equipment

- SprintRay SportsGuard (clear / red / blue)
- IPA ≥ 91%; mineral oil (optional finish)

Step	System
Intake	Medit Lab
Design	VERIFY
Nest / print	RayWare Cloud / Dashboard Print Setup → Pro 2
Wash	ProWash S custom 3/5/3
Cure	NanoCure — SportsGuard
Case log	SEAZONA

7. Process Controls

Gate	Do not proceed if	Proceed when
Printer	Not Pro 2	Pro 2 only
Design	Not approved	QC-A pass
Wash	Wrong cycle (e.g. standard 3/3/3 only)	Custom 3/5/3 complete
Pre-cure	Wet	Fully dry
Cure	Wrong profile	SportsGuard profile complete
Outbound	Failed QC-E	Bagged + SEAZONA

8. Procedure

A. Intake & scan QC

1. Medit Lab: verify ID, arch (typically maxillary), shade, coverage Rx, due date.
2. Scan QC; **QC-SCAN**.

B. Design (VERIFY)

3. Design/receive STL per Appliance Design Guidelines.
4. Lab Technician **approves**. **QC-A**: Coverage/thickness per guidelines; shade noted; STL labeled.

C. Nest (RayWare)

5. Auto-orient preferred; SportsGuard material; **100 µm**; default supports; Pro 2 queue.

D. Print

6. Shake **1 minute**; pour; assign; print; log lot. **QC-B**.

E. Wash & dry

7. ProWash S **custom multi-cycle 3/5/3**, IPA ≥ 91%. Fully dry. **QC-C**.

F. Post-cure

8. NanoCure **SportsGuard** profile. Remove supports. **QC-D**.

G. Finish, clean, bag

9. Carbide bur for stumps → Scotch-Brite/Fuzzies → optional mineral oil + cotton buff.

10. Soap + brush (+ steamer); dry; bag; SEAZONA. **QC-E**.

End of SOP-LAB-100.

9. Case Log (SEAZONA)

Field	Entry
Date / case ID	
Shade	☐ Clear ☐ Red ☐ Blue
Scan QC	☐ Pass ☐ Fail
Design approved by (Lab Technician)	
Lot / Pro 2	
Wash 3/5/3 OK	☐ Yes
NanoCure SportsGuard	☐ Yes
QC pass + bagged	☐ Yes — time __

10. Quality Checkpoints

ID	When	Pass	Fail action
QC-SCAN	Intake	Usable	Return
QC-A	Pre-print	Approved	Redesign
QC-B	Post-print	Complete	Remake
QC-C	Post-wash	Clean + dry	Re-wash/dry
QC-D	Post-cure	Cured	Remake / salvage
QC-E	Outbound	Finish + bag + SEAZONA	Hold

11. Remake Criteria

Finding	Action
Failed scan QC	Do not manufacture — request new scans
Incomplete print / delamination	Remake print
Printed on non-Pro 2	Remake on Pro 2 (IFU Pro 2-only)
Wrong wash cycle / under-cured / wrong NanoCure profile	Hold outbound; correct or remake
Torn margins after supports	Remake
Light support nubs only	Salvage — finish and re-check QC-E
Unsure	Stop and escalate to Doctor / lab lead

12. Competency

Requirement	Sign-off
Read SOP-LAB-100	Tech _ Date ____
Demonstrates custom 3/5/3 wash + SportsGuard NanoCure + process controls	Trainer _ Date ____
Completes 3 observed cases to bagged outbound with SEAZONA log	1. ____ 2. ____ 3. ____
Trainer attests ready	Trainer _ Date ____
Lab lead authorizes unsupervised production	_ Date ____

13. Troubleshooting & Escalation

Problem	Action
Bad scans	QC-SCAN fail → return to office
Print failure	Remake; filter resin; verify Pro 2 material assignment
Soft / tacky after cure	Confirm dry part and SportsGuard NanoCure profile; remake if needed
Printed / requested off Pro 2	Stop; remake on Pro 2 only

Escalate to Doctor / lab lead: unclear Rx; allergy; chronic remakes; IFU deviation.

Escalate to office: failed scan QC; missing prescription.

SprintRay Support: 1-800-914-8004 — missing NanoCure SportsGuard profile; repeated Pro 2 failures.

14. References

- SprintRay SportsGuard IFU-034 Revision 2 (effective 06/11/2026)

- Appliance Design Guidelines: <https://support.sprintray.com/s/article/Appliance-Design-Guidelines>
 - Local IFU archive: `SportsGuard.txt`
-

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

SOP-LAB-100 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-100 · DRAFT FOR REVIEW · Internal use · Target effective 09/10/2026