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

Temporary Crowns & Bridges

SprintRay Digital Temp — Lab Manufacturing Procedure

Smile Avenue Family Dentistry — In-House Laboratory
SprintRay Digital Temp — Lab Manufacturing Procedure

Document ID	SOP-LAB-050
Version	0.1 DRAFT
Effective (target)	09/10/2026
Owner	Lab Technician (process owner)
Related	Station Job Aid SOP-LAB-050-JA
Status	DRAFT FOR REVIEW

Start: Case received in Medit Lab with scan QC
End: Temporary restoration bagged and logged in SEAZONA for outbound delivery

1. Purpose

This procedure standardizes in-house manufacturing of SprintRay Digital Temp temporary full/partial crowns and temporary bridges 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 print → ProWash S → NanoCure → finish & polish → lab clean → bag & SEAZONA outbound log.

Out of scope: Chairside scanning; clinical try-in, cementation, and patient delivery; chairside chemical disinfection; definitive Ceramic Crown (SOP-LAB-060); Crown HT / Midas Restore paths; non-SprintRay printers.

3. Roles

Role	Responsibility
Clinical Assistant / Office	Sends case via Medit Lab; receives bagged temporary from lab
Lab Technician	Scan QC; design import/export/approve; manufacture; finish; bag; SEAZONA log
Trainer / Lead Lab Technician	Competency observation and sign-off
Doctor	Clinical indication, shade/Rx, try-in/cementation, remake authorization (outside manufacturing steps)

4. Practice Configuration

#	Item	Smile Avenue setting
1	Printer	Pro 2 only for this path
2	Cure unit	NanoCure — select exact **Digital Temp** resin profile (on-screen name; do not invent minutes)
3	Case intake	Medit Lab
4	Design	**VERIFY** — outside CAD or SprintRay Cloud Design per IFU (Lab Technician imports, exports STL, approves)
5	Wash	ProWash S — IPA ≥ 91% — Standard Multi-Cycle Wash (3 min wash / 3 min rinse / 3 min dry) preferred; or standard preprogrammed cycle
6	Shades	Bleach, A1, A2, B1 — select per prescription
7	Duration of use (IFU)	Expected ≤ 29 days
8	Lab clean before bag	Soap, toothbrush, and warm water (and/or steamer), then dry. Cleaning — not chemical disinfection.
9	Design approval before print	Lab Technician
10	Case log	SEAZONA
11	Design QC thickness	≥ 0.6 mm (IFU)

5. Safety

- Treat uncured Digital Temp as hazardous / sensitizing. Work in a well-ventilated area.

- Wear nitrile gloves, protective eyewear, lab coat or gown, and face protection when handling uncured resin, IPA, or grinding/polishing.
- Do not place incompletely cured resin in the mouth. Do not bag an under-cured restoration.
- Skin contact: wash with soap and water. Persistent irritation: stop work and follow the SDS.
- Do not substitute non-validated printers, washers, cure units, or resins for this path.
- Cure liquid waste resin fully before disposal. Follow hazardous-waste rules until cured.
- Do not use expired resin.

6. Materials & Equipment

Resins

- SprintRay Digital Temp (Bleach, A1, A2, B1 — per Rx)
- IPA ≥ 91%

Contraindications: known allergy; intraoral contact with uncured resin; use outside temporary crown/bridge indications.

Equipment stack

Step	System
Intake	Medit Lab
Design	**VERIFY** — outside CAD or SprintRay Cloud Design
Nest / print	RayWare → Pro 2
Wash	ProWash S
Cure	NanoCure — **Digital Temp** profile
Case log	SEAZONA

Design QC targets

Area	Minimum
Restoration thickness	≥ 0.6 mm

Confirm shade, unit count, and margins match Rx; intaglio free of critical voids.

Finish / polish (IFU)

Step	Tools / media
Smooth supports	Scotch-Brite / Fuzzies wheel
Polish	Pumice + polishing compound + muslin
Optional mirror	Pink compound + cotton buff
Optional characterization	IPS Empress Direct (Ivoclar) per workflow guide
Cleanup	Steamer and/or soap + brush + warm water; dry

7. Process Controls

Gate	Do not proceed if	Proceed when
Intake	Case missing or files unreadable in Medit Lab	Case open with matching ID / Rx
Scan QC	Holes, missing prep/bite, inadequate margins	Scans usable for design
Printer	Queued to any printer other than Pro 2	Pro 2 only
Design	Not Lab Technician–approved; thickness < 0.6 mm	QC-A pass
Resin	Expired or wrong shade/family	In-date Digital Temp per Rx; shaken 1 minute
Wash	IPA < 91%	ProWash S cycle complete
Pre-cure	Part wet	Fully dry
Cure	Wrong profile / custom times invented	NanoCure **Digital Temp** profile complete
Outbound	Failed QC-E; not bagged; not logged	Bagged + SEAZONA outbound ready

8. Procedure

A. Intake & scan QC

1. Open the case in **Medit Lab**.
2. Verify patient/case ID, tooth numbers, shade, and prescription notes (temporary crown vs bridge, due date).
3. Perform scan QC: prep(s) captured; bite usable; margins adequate; no critical holes or wrong-patient files.
4. **QC-SCAN:** Pass → continue. Fail → stop manufacturing; request rescan or clarified Rx from the office. Do not design on failing scans.

B. Design (VERIFY path)

5. Import accepted scans into the practice design path (**VERIFY:** outside CAD or SprintRay Cloud Design per IFU).
6. Design (or receive) temporary restoration STL per Rx.

7. Export print-ready **STL**.
8. Lab Technician **approves** the design for print.
   QC-A: Thickness ≥ 0.6 mm; shade/units match Rx; margins/occlusion reasonable; STL labeled.
   If QC-A fails — return to design; do not nest.

C. Nest (RayWare)

9. Import approved STL into RayWare.
10. Select appliance type for temporary restoration and printer **Pro 2**.
11. Select material **Digital Temp** (shade per Rx).
12. Orientation (IFU): intaglio facing **away** from platform; ~**10°** from anterior; desired layer thickness (RayWare typically defaults ~170 µm — accept validated default unless practice directs otherwise); default supports.
13. Send to the Pro 2 queue. Do not aim this path at any printer other than Pro 2.

D. Print

14. Confirm resin is not expired and matches approved shade.
15. Shake thoroughly for **1 minute**. Pour to at least the minimum fill line. Record lot in SEAZONA. Stir/filter tank resin if already poured.
16. Assign correct material/shade on the touchscreen.
17. Confirm build platform is clean and free of debris or cured resin.
18. Start print from the queue. Monitor on the printer or SprintRay Cloud.
19. When complete, wait for safety lid unlock. Remove platform carefully.
20. **QC-B:** Fully formed; no delamination or major voids. Fail → remake.

E. Wash & dry

21. Transfer to **ProWash S**.
22. Run **Standard Multi-Cycle Wash** (3/3/3) with IPA ≥ 91% (or standard preprogrammed cycle per IFU). Preferred: basket wash with intaglio facing propeller.
23. Fully dry with compressed air — especially intaglio and fossae. Residual IPA interferes with final cure.
    QC-C: Clean and fully dry. Do not cure wet parts.

F. Post-cure

24. Place dry restoration in **NanoCure**.
25. Select the **Digital Temp** preprogrammed resin profile. Follow on-screen prompts. Do **not** invent custom cure times.
26. Allow to cool before handling if warm. Remove supports with flush cutters or diamond disc; cut close to the restoration.
    QC-D: Fully cured (no tack); supports removed without tearing margins. Fail → remake or salvage per remake criteria.

G. Finish, clean, bag (end of procedure)

27. Smooth support contacts (Scotch-Brite / Fuzzies). Polish with pumice + compound + muslin; optional pink compound / cotton buff.
28. Optional characterization per IFU / workflow (IPS Empress Direct) only if Rx requests.

29. Clean with soap, toothbrush, and warm water (and/or steamer); dry. Lab cleaning — not chemical disinfection.
30. Label and bag for outbound delivery from the in-house lab.
31. Complete SEAZONA case log; mark bagged / ready for outbound.
    QC-E: Finish OK; cleaned; bagged; labeled; SEAZONA complete. Do not release if QC-E fails.

End of SOP-LAB-050. Office receipt, chairside disinfection, try-in, and cementation (e.g., Telio Link per IFU) are clinical — not this manufacturing procedure.

9. Case Log (SEAZONA)

Field	Entry
Date	
Patient / case ID	
Medit Lab reference	
Teeth / units	
Scan QC	☐ Pass ☐ Fail → returned
Designed by (**VERIFY** path)	
Design approved by (Lab Technician)	
Digital Temp shade + lot	
Printer	Pro 2 ☐
ProWash S cycle OK	☐ Yes
NanoCure profile	Digital Temp ☐
Lab Technician initials	
QC-SCAN + A–E pass	☐ Yes
Remake?	☐ No ☐ Yes — reason: _
Bagged for outbound	☐ Yes — time _

No SEAZONA bagged status = not released from the lab.

10. Quality Checkpoints

ID	When	Pass	Fail action
QC-SCAN	After Medit Lab intake	Scans usable	Return to office
QC-A	Pre-print	Approved design + ≥ 0.6 mm	Return to design
QC-B	Post-print	Complete geometry	Remake print
QC-C	Post-wash	Clean + dry	Re-wash/dry
QC-D	Post-cure	Fully cured; supports clean	Remake / salvage
QC-E	Before outbound	Finish + clean + bag + SEAZONA	Hold release

11. Remake Criteria

Finding	Action
Failed scan QC	Do not manufacture — request new scans
Incomplete print / delamination / major voids	Remake print
Printed on non–Pro 2	Remake on Pro 2
Wet / under-cured / wrong cure 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

A Lab Technician may run this procedure unsupervised after:

Requirement	Sign-off
Read SOP-LAB-050 and Job Aid SOP-LAB-050-JA	Tech _ ***Date*** ___
Demonstrates Medit Lab intake, scan QC, design import/export/approve, and 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 in Medit Lab	QC-SCAN fail → return to office
Print failure	Remake; filter resin; verify material assignment on Pro 2
Soft / tacky after cure	Confirm dry part and Digital Temp NanoCure profile; remake if needed
Shade mismatch	Confirm shake/mix and cure; remake if Rx shade wrong
Allergy or wrong indication noted	Stop — Doctor; do not manufacture

Escalate to Doctor / lab lead: unclear Rx; allergy; chronic remakes; IFU deviation requests.
Escalate to office (Medit Lab / SEAZONA): failed scan QC; missing prescription.
SprintRay Support: 1-800-914-8004 — missing NanoCure Digital Temp profile; repeated Pro 2 failures.

14. References

- SprintRay Digital Temp IFU-026 Revision 3 (effective 07/29/2026)
- Local IFU archive: `/workspace/sprintray-ifu/all/DigitalTemp.txt`
- SprintRay hardware–resin compatibility (validated printers / wash / cure)

Smile Avenue Family Dentistry — In-House Laboratory · Internal use only
SOP-LAB-050 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.