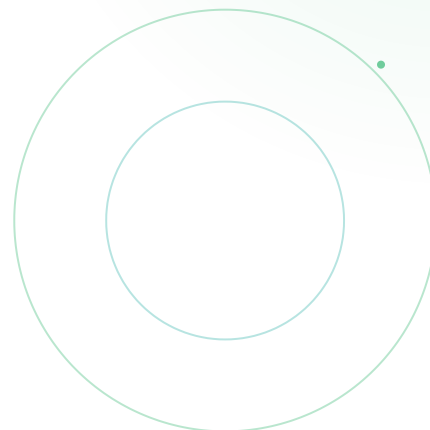




ISO 8589 Sensory Lab Design Checklist

Specification language and commissioning acceptance criteria for turnkey sensory test rooms.

Room program and adjacency rules, booth construction specification, environmental envelope with verification methods, and the ten commissioning checks that catch ninety percent of handover defects.

8

Booth reference layout

5-15 Pa

Room pressurization

10

Commissioning checks

ISO 8589

ASTME18

Turnkey Lab

Commissioning

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Purpose. This engineering manual condenses ISO 8589 test-room guidance and APAC field experience into specification language a project team can act on: room-by-room requirements, booth construction details, environmental targets, and a commissioning checklist with acceptance criteria. It is written for R&D; directors planning a new facility and for facility managers auditing an existing one.

About this document

This technical whitepaper is published by BioSensory Pte Ltd (Singapore), exclusive distributor of FIZZ Sensory Analysis Software (Biosystèmes, France) across Southeast Asia and Greater China. Internal benchmark figures reflect aggregated, anonymized results from APAC customer deployments and BioSensory pilot studies. Worked examples are illustrative and clearly labeled as such. It is provided for professional education; it does not replace the cited ISO/ASTM standards.

1. Room Program and Adjacency Requirements

Zone	Function	Critical requirements
Test room	Booth evaluation of products by panelists or consumers	Positive pressure; D65 lighting; direct hatch access from prep; no visual/acoustic cross-talk between booths
Sample preparation	Tempering, plating, coding, tray staging	Exhausted and negative vs. test room; food-service grade surfaces; separate cosmetic/fragrance handling where applicable
Discussion room	Trained panel vocabulary, consensus, training (ISO 8586)	Round or hexagonal table; whiteboard; no consumer line of sight to prep
Waiting / check-in	Consumer CLT staging, consent, code handout	Comfortable holding capacity for 1.5x session size; no view into test room
Support / storage	Panel leadership, records, IT, cleaning store	Locked records storage for raw data; server/IT separately ventilated

Table 1. Minimum room program. Adjacency errors (prep odor paths, consumer exposure to prep) are the most common and most costly layout failures.

2. Booth Construction Specification

Item	Specification	Rationale
Booth width	900-1,000 mm, full-height partitions	Prevents visual contact; fits touchscreen + tray + writing space
Counter	Stainless or solid-surface, 750-900 mm height, 300-400 mm deep	Hygienic, heat-resistant, standard seated posture
Pass-through hatch	Bread-sliced, interlocked, self-closing doors on both sides	Sample exchange without odor or visual transfer
Lighting	Dimmable LED at counter plane, D65 reference tubes, uniform within +/-10%	ISO 8589 reference illuminant; masks color when required (red light mode for taste-only tests)
Power and data	2 outlets + network drop per booth	FIZZ touchscreen per booth; paper fallback
Signaling	Panelist call light / soft chime	Silent summons of panel staff without leaving the booth
Seating	Adjustable, no casters, washable	Stability and hygiene

Table 2. Booth construction specification used in BioSensory turnkey projects.

3. Environmental Targets

Table 3 lists the environmental envelope the mechanical design must hold under full session load at tropical ambient. Acceptance is demonstrated by mapping, not by design documents: seven-day continuous logging in commissioning and a repeat after the first monsoon month.

Parameter	Target	Verification
Temperature	20-22°C stable ($\pm 1-2^\circ\text{C}$ across session)	7-day mapping, 3 sensors, occupied load
Relative humidity	45-55% RH	Logged mapping with temperature
Pressurization	Test room positive vs. corridor; prep negative vs. test room	Manometer survey with doors cycling
Air freshness	No recirculation of prep exhaust; MERV 13 minimum	Airflow smoke-pencil audit at hatches
Acoustics	Background below conversational interference; no cross-booth transmission	Simple speech-intelligibility walk test
Illuminance	300-500 lux at counter (product dependent); dimmable	Lux map at counter plane

Table 3. Environmental envelope and verification method.

4. Ten Commissioning Checks That Catch 90% of Problems

- Afternoon-peak thermal mapping with a full mock panel, HVAC at design load.
- Smoke-pencil airflow trace at every hatch and door: flow must always move prep to exhaust, never prep to test room.
- D65 lamp verification against supplier photometric certificate.
- FIZZ end-to-end session dry run: booth tablets, session controller, data write, backup.
- Speech test between adjacent booths with the room populated.
- Trap-primer and floor-drain audit in prep (dry traps vent sewer gas).
- UPS/generator failover with HVAC restart - samples survive a 30 s blink.
- Cleaning-chemical storage sealed away from the test room (residual odor).
- Wheelchair-accessible booth and washroom path verified.
- Seasonal re-verification scheduled and assigned to a named owner.

Leverage

BioSensory delivers ISO 8589 facilities as turnkey engagements: CAD layout, mechanical specification review, booth fabrication, FIZZ installation, panel training (ISO 8586), and the commissioning audit above - one accountable partner from floor plan to first validated session.

References

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