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NICD STANDARD V3.1

A TECHNICAL FRAMEWORK FOR UNIVERSAL APPLICATION

Version 3.1 (Revised)
Issuing Authorities: COSMETONOESIS
Document Status: Foundational Standard
Scope: All cosmetic, personal care, oral care, fragrance, and wellness product development applying to the Neurodivergent Community

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Abstract

Neuro-Inclusive Cosmetic Design (NICD) is an emerging discipline that applies principles of universal design, sensory science, and cognitive ergonomics to cosmetic and personal care product development. This document establishes a technical framework where the sensory processing profiles, cognitive patterns, and executive function capabilities of neurodivergent individuals serve as primary design constraints, equal in status to stability, safety, and efficacy requirements. The framework provides measurable parameters, assessment protocols, and ethical guidelines for creating products that reduce neurological friction in daily care rituals.

Preamble: The Neurological Blind Spot in Product Design

Contemporary cosmetics and personal care products development is optimised around an implicit neurotypical user model characterized by average sensory thresholds, executive function capacity, and ritual consistency. This narrow assumption systematically excludes a significant proportion of the population whose neurological profiles diverge across sensory processing, attention regulation, and cognitive load tolerance.

The resulting products often compound this exclusion with **systemic dishonesty**: sensory cues that mislead, claims that overpromise, and complexities that obfuscate. For neurodivergent individuals—who frequently prioritize justice, fairness, and pattern recognition—this dishonesty is not merely disappointing; it represents a **profound breach of trust** that can trigger rejection sensitivity and amplify existing neurological friction.

NICD asserts that neurological diversity represents a fundamental dimension of human variation rather than a marginal use case. Furthermore, it recognizes that **honesty is the foundation of accessibility**. Products that fail to align their communications, sensory cues, and performance create not only practical barriers but ethical ones, imposing avoidable cognitive, sensory, and emotional costs that result in inconsistent use, abandonment, and diminished well-being.

This manifesto formalizes the principles, constraints, and verification protocols required to transition cosmetic science from exclusionary optimization to inclusive system design, with radical functional honesty as its non-negotiable cornerstone. It establishes a framework where what a product *is* aligns with what it *appears to be* and what it *claims to do*, creating predictable, trustworthy interfaces between diverse minds and their daily care rituals.

Article I: Core Definitions

1.1 Neuro-Inclusive Cosmetic Design (NICD)

An interdisciplinary design and engineering practice in which the sensory processing characteristics, cognitive patterns, and executive function constraints of neurodivergent individuals are treated as primary design parameters governing formulation architecture, delivery systems, packaging, application rituals, and user communication.

1.2 COSMETONOESIS

Etymology: Greek *kosmetikos* (order, arrangement, adornment) + *noesis* (intellection, conscious understanding).

The deliberate cognitive act of creating perceptible order through cosmetic formulation. COSMETONOESIS denotes the intentional transformation of sensory and ritualistic chaos into predictable, harmonious systems. It constitutes the central epistemological principle of NICD. COSMETONOESIS is the issuing authority of the Neuro-Inclusive Cosmetic Design Standard.

1.3 NICD (Neuro-Inclusive Cosmetic Design):

The technical framework, parameters, and assessment methodology defined in this document.

1.4 ADHD Friendly™:

The consumer-facing certification mark awarded to products that successfully complete the NICD audit process and meet all thresholds defined herein.

1.5 The ADHD Algorithm™:

The overarching methodology and intellectual framework encompassing both NICD and the ADHD Friendly™ certification system.

1.6 Neurological Friction

A qualitative construct representing the cumulative cognitive, sensory, and emotional load imposed by a product interface that diverges from a user's neurocognitive profile. For the purpose of operational scoring in this standard, neurological friction is measured as the inverse of performance in Domains 1 (Sensory Predictability), 2 (Cognitive Friction Coefficient), and 4 (Task-Completion Architecture) of the NICD Assessment Matrix.

1.7 Stimulation Band

The calibrated sensory profile of a product, defined according to its dominant neurological effect:

- Grounding: Low-frequency, regulating, arousal-attenuating
- Clarifying: High-frequency, differentiating, focus-supporting
- Neutral: Minimal sensory signature, non-interfering

1.8 The Issuing Authority

This standard, its methodology ("The ADHD Algorithm™"), and the "ADHD Friendly™" certification mark are the intellectual property of COSMETONOESIS, which is their current author, issuer, and administrator. The future formation of an independent, multi-stakeholder International Consortium for Neuro-Inclusive Cosmetic Design is a strategic goal outlined in Article XI. All inquiries, licensing, and certification requests under the present version of this standard must be directed to COSMETONOESIS.

Article II: Foundational Axioms

Axiom 0: The Principle of Radical, Functional Honesty

A product's communication, sensory cues, and performance must align without deception, omission, or neurological betrayal. Honesty is a non-negotiable safety parameter that precedes all other design considerations

Axiom 1: Completion Supersedes Optimization

A ritual performed consistently with basic fidelity delivers greater well-being benefit than a perfect ritual performed once and abandoned. NICD formulates for cumulative, fault-tolerant benefit.

Axiom 2: Predictability Is Non-Negotiable

Sensory, performance, and behavioural predictability across batches and throughout shelf-life is as critical as microbial or chemical stability. Sensory or functional drift constitutes product failure.

Axiom 3: Complexity Demands Transparency and Requires Justification

Ingredient and functional complexity are permitted only when:
a) Each component serves a non-redundant purpose in a coherent system architecture
b) Its purpose can be communicated intuitively to the neurodivergent mind
c) It does not increase Neurological Friction.

Axiom 4: The User–Product Interface Is a Unified System

The formulation cannot be separated from its packaging, dispensing mechanism, required preparation steps, or cleanup requirements. All touchpoints must be designed in concert to minimize executive function demand.

Axiom 5: Sensory Attributes Are Functional Parameters

Every sensory attribute (texture, scent, taste, visual appearance, sound) must serve a deliberate neurological purpose: regulation, differentiation, or minimal interference. No sensory element exists solely for marketing appeal.

Article III: Universal NICD Design Parameters

3.1 Sensory Engineering Specifications

Parameter	Standard Industry Practice	NICD Requirement	Measurement Method
Olfactory Consistency	Batch variance ≤20%	Batch variance ≤10% in key notes	GC-MS comparison; blind panel
Tactile Reproducibility	Viscosity ±25% (10-40°C)	Viscosity ±15% across temperature range	Rheometer at 10°C, 25°C, 40°C
Application Feedback	Often unspecified	Clear start/stop indicators; no "enough?" ambiguity	Panel reporting; task completion analysis
Sensory Band Stability	Not typically measured	Profile stable for 100% of shelf life	Accelerated aging with sensory panels

NICD requires explicit sensory targets for onset, intensity, duration, and termination across all sensory modalities. Cross-modal coherence between visual, tactile, olfactory, and gustatory cues is mandatory; conflict constitutes design failure.

3.2 Cognitive Load Management

- Maximum one-pre-use decision (zero optimal)
- No ambiguous sequencing requirements

- Visual or tactile dosage indicators
- Interrupt-resilient application (can resume without restart)
- Memory-independent use (no need to recall specific techniques)

3.3 Expanded Stability Definition

Beyond standard stability testing, NICD requires verification of:

- Sensory profile consistency (olfactory, gustatory, tactile)
- Behavioural consistency (spread, absorption, foam characteristics)
- Packaging-formulation synergy (delivery system maintains integrity)

Article IV: NICD Development Protocol

NICD-compliant development proceeds through five mandatory phases: neurological profiling, friction analysis, system architecture design, neuro-inclusive testing, and communication architecture validation. Each phase is documented and auditable.

Phase 1: Neurological Profile Mapping

Identify: Target Stimulation Band × Time of Day × User Cognitive State × Ritual Context.

Phase 2: Friction Point Analysis

Audit existing solutions across complete use cycle: Procurement → Storage → Preparation → Application → Cleanup → Repurchase.

Phase 3: System Architecture Design

Formulate and deliver system in parallel. Ingredients selected for:

- Multifunctional synergy (reduces product count)
- Sensory band compatibility
- Inherent stability
- Clear communication potential

Phase 4: Neuro-Inclusive Testing

Panels must include ≥60% neurodivergent individuals, stratified by sensory profiles. Test for:

- Sensory predictability across repeated uses
- Ritual completion rate versus alternatives
- Unprompted cognitive load feedback
- Real-world routine integration

Phase 5: Communication Architecture

Information structured for neurodivergent cognition:

- Functional block grouping of ingredients
- Sequential visual guides without text dependency
- Explicit avoidance lists (potential triggers)
- Benefit-friction ratio transparency

Article V: Prohibited Design Patterns

The following patterns are incompatible with NICD compliance:

- Performative complexity without functional benefit
- Sensory ambiguity or paradox without neurological purpose
- Precision-dependent efficacy
- Assumed user competence or sustained attention
- Opaque innovation lacking functional translation
- Guilt-based or moralizing usage narratives

Article VI: Assessment & Certification

6.1 NICD Assessment Matrix

Products are evaluated across five domains:

1. Sensory Predictability (30 points)
2. Cognitive Friction Coefficient (25 points)
3. Stimulation Band Fidelity (20 points)
4. Task-Completion Architecture (15 points)
5. Transparent Complexity (10 points)

ADHD Friendly™ Certification Threshold: ≥80/100 points, with no domain below 60% of possible points.

6.2 Honesty Audit Protocol

Dual-panel verification system:

- Panel H (Honesty Panel): Neurodivergent users assess promise-experience alignment
- Panel B (Blind Panel): Naïve users establish ground-truth perception

Honesty Gap Score (HGS) calculated from:

- Claim-to-blind alignment
- Cue-to-experience alignment
- Omission penalties

ADHD Friendly™ Certification Threshold: HGS ≤2 (excellent alignment)

6.3 ADHD Friendly™ Certification Mark

Products meeting all certification thresholds defined in Sections 6.1 and 6.2 are eligible to license the **ADHD Friendly™** certification mark from the Issuing Authority.

**Usage Rules: **

- The mark must be accompanied by the ™ symbol.

- The mark must link to the official certification registry at [your-website]/certified.

- The mark may not be altered, resized disproportionately, or separated from its accompanying verification QR code.

- Certification is valid for one (1) year and requires annual re-audit per Appendix D.4.

**The ADHD Friendly™ mark signifies: **

1. The product has been audited against the NICD Standard (V3.1).

2. It meets rigorous thresholds for Sensory Predictability, Low Cognitive Friction, and Honesty.

3. It has been validated by neurodivergent user panels.

6.4 Tiered Pathways: NICD Verified & ADHD Friendly™ Certified

To promote equitable access to neuro-inclusive design principles, two compliance tiers are established:

A. NICD Verified (Self-Assessed):

- Pathway: The brand completes the full NICD Assessment Matrix (Appendix A) through internal testing, scoring ≥80/100 with no domain below 60%.
- Permission: Allows public use of the term "NICD Verified" alongside a specific disclaimer: *"This product is self-assessed as aligning with Neuro-Inclusive Cosmetic Design principles. Full independent panel verification for the ADHD Friendly™ certification is pending."*
- Requirement: The complete self-audit scorecard must be made publicly accessible (e.g., via QR code).

B. ADHD Friendly™ Certified:

- Pathway: Requires all criteria in Sections 6.1 and 6.2, including successful dual-panel Honesty Audit (Appendix D) conducted by an auditor recognized by COSMETONOESIS.
- Permission: Grants a license to use the ADHD Friendly™ certification mark and seal.

The "NICD Verified" tier is designed as an on ramp for responsible adoption, with the goal of encouraging eventual progression to full "ADHD Friendly™ Certified" status.

Article VII: Implementation Guidelines

7.1 For Formulators

- Incorporate NFC analysis in early-stage development
- Design for fault tolerance (50% dose delivers ≥65% efficacy)
- Select ingredients for sensory band compatibility
- Test with appropriately stratified panels

7.2 For Brands

- Structure communication for neurodivergent cognition
- Provide complete transparency on limitations
- Avoid neurodiversity-washing (claims without substantiation)
- Support ritual consistency over performative perfection

7.3 For Researchers

- Develop standardized neuro-inclusive testing protocols
- Investigate neurological correlates of sensory bands
- Establish biomarkers for friction coefficient measurement
- Create open-source reference formulations

Article VIII: The Principle of Radical, Functional Honesty

8.1 Preamble: The Neurological Impact of Betrayal

Neurodivergent individuals, particularly those with ADHD, frequently operate with delayed or impaired interoception (internal sense perception) and rejection sensitivity dysphoria (RSD). This creates a vulnerability: when

an external signal (a product's promise) mismatches internal experience, the brain cannot easily dismiss it as "marketing." It is processed as a systemic failure of trust, compounding existing neurological load.

Therefore, in NICD, honesty is a functional safety feature. It reduces cognitive dissonance, minimizes post-purchase anxiety, and prevents the ritual abandonment that follows broken promises.

8.2 The Honesty Parameters

A. Sensory Promise Fulfilment
The product's sensory profile (band, intensity, duration) as communicated through packaging, marketing, and implicit cues (colour, texture) must be accurate within a 15% variance as measured by user panels. A "calming cream" must not contain hidden stimulating ingredients. A "gentle cleanse" must not tingle or tighten.

B. Ingredient Transparency as Function, Not Virtue
Ingredients must be communicated in functional blocks (see Article IV). The purpose of each block must be stated in plain language. If an ingredient like "Fragrance (Parfum)" is used, its primary role must be stated: e.g., "Fragrance (for sensory grounding)."

C. Efficacy Scope Clarity
Claims must be scoped to direct, user-perceivable outcomes within the ritual timeframe. Prohibited: vague, future-oriented, or subjective perfection claims ("anti-aging," "detoxifying," "perfect skin").
Permitted: "Supports gum comfort," "Leaves skin feeling smoother," "Helps create a focused start to the day."

D. Failure State Transparency
If a product has a known potential negative interaction (e.g., propolis allergy, staining with certain actives), this must be communicated with equal visual weight to its benefits. Warnings are not buried in disclaimers but integrated into the core choice architecture.

8.3 The "No Gaslighting" Clause

A product must never:

1. Use sensory dissonance (e.g., a sweet, pink colour for a harsh taste) to create memorability at the expense of predictability.
2. Claim to solve a problem it merely masks.
3. Use the language of neurodiversity as a marketing narrative without the underlying design integrity to support it.
4. Claim to represent or be endorsed by a multi-stakeholder governance body that does not yet formally exist.

8.4 Verification & Accountability

The Honesty Audit: As part of NICD certification, products undergo a dual-panel verification:

- Panel A (Neurodivergent): Uses the product based on its communication alone. Does the experience match the promise?
- Panel B (Blind, Control): Uses the product with no prior information. What do they perceive its function and band to be?
  Alignment between Panel B's blind perception and the brand's stated promise must exceed 80% for ADHD Friendly™ certification

Article IX: Ethical Position

NICD recognises that self-care is not a luxury but a fundamental human activity that maintains physical health, psychological well-being, and social participation. When products are neurologically mismatched, they become sources of:

- Guilt (for inconsistent use)
- Anxiety (about "doing it wrong")

- Financial waste (abandoned products)
- Social withdrawal (avoiding situations requiring preparation)

Therefore, NICD is an ethical imperative, not a market niche. It asserts that:

- Neurological accessibility is a right, not a privilege.
- Cognitive ergonomics are as important as physical ergonomics.
- Dignity in self-care requires products that adapt to diverse neurologies.
- Transparency about limitations is as important as claims about benefits.

NICD recognizes self-care as a foundational human activity supporting health, dignity, and social participation. Neurologically mismatched products impose guilt, anxiety, financial waste, and withdrawal. Accordingly, NICD defines neurological accessibility as an ethical obligation rather than a market differentiation strategy.

Article X: ADMINISTRATION, GOVERNANCE, & FUTURE GOVERNANCE

Issuance & Adoption

Authored and issued by:
COSMETONOESIS

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Adoption of this standard signifies agreement with its principles and the terms of its license. COSMETONOESIS invites researchers, brands, and advocates to collaborate in the development of the future International Consortium and the evolution of this work.

10.1 Current Governance

This standard is authored, issued, and administered by COSMETONOESIS. All certification rights, licensing agreements, and authority concerning the "ADHD Friendly™" mark are managed by COSMETONOESIS under the terms of this document.

10.2 Commitment to Evolution

COSMETONOESIS commits to the ongoing development of this standard as a living document. This includes:

- Maintaining and updating the technical protocols.
- Administering the certification program.
- Incorporating feedback from practitioners and new scientific research.
- Revisiting and revising this standard annually, with all changes documented in a new version.

10.3 Pathway to a Consortium

The establishment of an independent, multi-stakeholder International Consortium for Neuro-Inclusive Cosmetic Design is a declared objective to ensure broad industry representation in future governance. COSMETONOESIS will initiate and facilitate the formation of this Consortium. Upon its formal constitution, authority for this standard and its certification marks may transition to the Consortium by mutual agreement.

Article XI: Future Directions

11.1 Short-term (1-2 years)

- Refine sensory band calibration references
- Develop open-source assessment tools

- Establish industry working groups
- Formalize the founding structure and membership of the International Consortium.
- Create certification programs for practitioners

11.2 Medium-term (3-5 years)

- Integrate with regulatory frameworks
- Develop NICD modules for cosmetic science curricula
- Create cross-industry standards (packaging, dispensing)
- Establish global consortium for research

11.3 Long-term (5+ years)

- Neurological customization through AI formulation
- Biomarker-verified product personalization
- Mainstream adoption as standard practice
- Regulatory recognition of neurological safety

Closing Statement

Neuro-Inclusive Cosmetic Design represents a paradigm shift from designing for the average to designing for human variance. By establishing technical parameters for neurological accessibility, this framework enables the creation of products that respect diverse ways of experiencing and interacting with the world.

The implementation of NICD principles promises not only greater market inclusion but also advances in formulation science, sensory engineering, and human-centered design. As the field evolves, this document should serve as a living framework, updated through collaborative research and practitioner experience.

NICD advances cosmetic science toward cognitive ergonomics and neurological equity. By designing for the full spectrum of human neurology, products can transform obligation into ritual, friction into flow, and chaos into order.

Issued by COSMETONOESIS

Appendix References

- A: NICD Assessment Protocol (Complete Scoring Protocol)
- B: Guidelines for Neuro-Inclusive User Testing
- C: Reference Standards for Sensory Band Calibration
- D: The Honesty Alignment & Verification Protocol
- E: Mandatory Attribution and Audit Reporting Format

APPENDIX A: THE NICD ASSESSMENT PROTOCOL

0.1 Attribution Verification – Mandatory Pass/Fail Criterion

- **Requirement:** Any audit report, summary, or public communication of findings generated using this standard **must** explicitly cite the source as follows:
  "Audit conducted using the NICD Standard V3.1 and The ADHD Algorithm™ methodology, authored and issued by COSMETONOESIS."
  A direct link to the official source (https://www.cosmetonoesis.com) is required for digital publications.
- **Placement:** This attribution must appear in the **executive summary, methodology section, or footer** of the report.
- **Scoring:** This is a **binary, pass/fail prerequisite**. If this correct attribution is absent, the audit is considered **invalid** and cannot proceed to Domain scoring. The total score for an invalid audit is **0/100**.

Step-by-step guide for conducting each domain assessment (Sensory Predictability, Cognitive Friction, etc.). Include example methodologies, sample sizes, and statistical analysis recommendations.

Scoring Protocol: Evaluate each criterion 1-5 (1=Failure, 3=Acceptable, 5=Exemplary). Total score ≥80% required for ADHD FRIENDLY™ / NICD certification. Formulas scoring <60% in any single domain require complete redesign. *Note: Some criteria may not apply to certain product categories (N/A).*

DOMAIN 1: SENSORY PREDICTABILITY (30 Points)

Criterion	Assessment Method	Target	Score	Notes
1.1 Olfactory Consistency	GC-MS comparison Batch 1 vs. Batch 5; blind panel detection	≤10% variance in key notes	__/5	Excludes fragrance-free products
1.2 Tactile Reproducibility	Rheology at 10°C, 25°C, 40°C; panel texture feedback	Viscosity ±15% across temp range	__/5	For all leave-on/rinse-off
1.3 Application Consistency	Panel reports of variance in spread, absorption, or behaviour	0 unprompted "this feels different today" reports	__/5	
1.4 Onset Latency	Timing of sensation onset (cooling, warming, tingling, tightening)	<3 seconds variance between panellists	__/5	Excludes delayed-actives (e.g., retinoids)
1.5 After-Sensation Duration	Panel reporting of sensation persistence after application	≤2 hours for leave-on; ≤30 sec for rinse-off	__/5	
1.6 Phase Behaviour Stability	Visual/physical inspection for separation, settling, crystallization	0 phase changes in accelerated aging	__/5	

DOMAIN 1 SUBTOTAL: __/30

DOMAIN 2: COGNITIVE FRICTION COEFFICIENT (25 Points)

Criterion	Assessment Method	Target	Score	Notes
2.1 Decision Points	Count pre-use decisions (shake, mix, choose setting, sequence)	0 decisions optimal; 1 acceptable	__/5	
2.2 Dosage Ambiguity	Panel reports: "How much is enough?" "Did I use too much/little?"	0 ambiguity queries; clear visual/feel indicators	__/5	
2.3 Cleanup Complexity	Residue measurement (UV tracer); panel feedback on cleanup effort	>95% removal with standard action	__/5	For products requiring cleanup
2.4 Packaging Intuitiveness	Time-to-first-successful-use with no instructions; error rate	<15 seconds, ≤1 error	__/5	
2.5 Memory & Sequencing Load	24-hour recall of steps/sequence; interference with parallel tasks	>90% accurate recall; 0 reports of "forgot next step"	__/5	Multi-step products only

DOMAIN 2 SUBTOTAL: __/25

DOMAIN 3: STIMULATION BAND FIDELITY (20 Points)

Criterion	Assessment Method	Target	Score	Notes
3.1 Band Assignment Accuracy	Blind panel categorization vs. designed band	>80% correct categorization	__/5	
3.2 Band Purity	Reports of discordant sensations within assigned band	0 unprompted reports of discordance	__/5	
3.3 Intensity Calibration	Panel rating 1-10 intensity vs. designed intensity	Mean rating within ±1.5 of target	__/5	
3.4 Cross-Modal Alignment	Consistency between visual, olfactory, tactile cues	0 reports of "looks X but feels Y"	__/5	

DOMAIN 3 SUBTOTAL: __/20

DOMAIN 4: TASK-COMPLETION ARCHITECTURE (15 Points)

Criterion	Assessment Method	Target	Score	Notes
4.1 Fault Tolerance	Efficacy/satisfaction at 50%, 100%, 150% recommended use	50% dose ≥65% of full dose satisfaction/efficacy	__/5	
4.2 Ritual Duration	Measured average time vs. claimed/expected time	Within ±20% of expected duration	__/5	
4.3 Completion Rate	7-day in-home use: Percentage of intended uses completed	≥80% completion rate	__/5	
4.4 Interrupt Resilience	Recovery rate after mid-ritual interruption	>90% resume without restarting	__/5	

DOMAIN 4 SUBTOTAL: __/15

DOMAIN 5: TRANSPARENT COMPLEXITY & SAFETY (10 Points)

Criterion	Assessment Method	Target	Score	Notes
5.1 Ingredient Justification	Documentation of each ingredient's functional role	100% have documented functional justification	__/5	Excludes trace impurities
5.2 Neuro-Safety Screening	Review for common neurodivergent sensitivities (e.g., strong menthol, gritty scrubs)	0 high-risk triggers without clear warning/alternative	__/5	
5.3 Communication Clarity	User testing of explanation comprehension (Flesch-Kincaid)	≤8th grade reading with function block comprehension	__/5	

DOMAIN 5 SUBTOTAL: __/10

TOTAL SCORE: __/100

ADHD FRIENDLY™ / NICD CERTIFICATION THRESHOLD: ≥80 points
DOMAIN FAILURE THRESHOLD: Any domain <60% of possible points

Product Category Adjustments:

- *Rinse-off products:* 1.5, 2.3 weighted ×1.5
- *Fragrance-free products:* 1.1, 3.1-3.3 marked N/A
- *Multi-step systems:* 2.5, 4.4 weighted ×1.5

APPENDIX B: GUIDELINES FOR NEURO-INCLUSIVE USER TESTING

Ethical recruitment practices, compensation guidelines, creating safe testing environments, example demographic surveys, and methods for stratifying by sensory profile (Seeker/Avoider) without requiring a diagnosis.

B.1 Primary Neurotype Classification

Inclusion Criteria (≥1 required):

- Clinically diagnosed ADHD, Autism Spectrum Condition, Sensory Processing Disorder
- Self-identified neurodivergent with documented sensory/cognitive patterns affecting self-care
- Diagnosed anxiety/depression with sensory sensitivity components
- Occupational therapist/psychologist referral for sensory integration challenges

Exclusion:

- Inability to articulate sensory experiences
- Current participation in >3 other panels (sensory fatigue)
- Language/comprehension barriers to consent forms

B.2 Sensory Processing Profile Assessment

Universal Sensory Domains

Tactile (Rate 1-5: 1=Strongly Avoid, 3=Neutral, 5=Strongly Seek)

- __ Texture preference continuum: Light (gels/mists) ↔ Heavy (creams/balms)
- __ Sensitivity to residue ("sticky," "tacky," "filmy")
- __ Reaction to temperature variations in products
- __ Tolerance for granular/scrubbing/exfoliating textures
- __ Sensitivity to application method (fingers, tools, pads)

Olfactory

- __ Identification of triggering scent categories
- __ Preference for scent complexity vs. simplicity
- __ Sensitivity to scent persistence
- __ Reaction to fragrance-free vs. scented products

Visual

- __ Preference for product appearance: Clear/translucent ↔ Opaque/coloured
- __ Sensitivity to visual cues (e.g., colour changes, separation)
- __ Preference for packaging transparency (seeing contents)

Auditory (Packaging-Related)

- __ Sensitivity to packaging sounds (clicks, snaps, crinkles)
- __ Preference for silent vs. audible feedback mechanisms

Product-Specific Domains

Hair Care Addendum:

- __ Sensitivity to scalp stimulation during application
- __ Reaction to weight of product in hair
- __ Sensitivity to rinsing completeness

Skin Care Addendum:

- __ Sensitivity to tingling/"active" sensations
- __ Preference for layering compatibility
- __ Sensitivity to drying time

Colour Cosmetics Addendum:

- __ Sensitivity to brush/application tool texture
- __ Precision requirement vs. forgiveness
- __ Sensitivity to removal process

B.3 Executive Function Impact Assessment

Rate frequency (1=Never, 5=Always):

- __ "I abandon self-care rituals when overwhelmed"
- __ "I avoid products with multiple steps or decisions"
- __ "I use incorrect amounts because measurement is unclear"
- __ "I forget products exist if not in direct line of sight"
- __ "I struggle with sequencing multi-product routines"
- __ "I dislike products requiring precise timing/waiting"

B.4 Panellist Stratification Matrix

Profile	Sensory Score	Executive Score	Use Cases
Sensory Avoider (SA)	≥4 in Avoid categories	Any	Testing sensitive skin, fragrance-free, gentle formats
Sensory Seeker (SS)	≥4 in Seek categories	Any	Testing active treatments, textured products, scented lines
High Executive Load (HEL)	Any	≥4 average	Testing multi-step systems, packaging, routine integration
Low Sensory Regulation (LSR)	Extreme scores (1 or 5) in multiple domains	Any	Calibration testing, threshold determination
Mixed Profile (MP)	Moderate scores (2-4)	Moderate (2-4)	General usability, broad appeal assessment

Panel Composition Requirements (per product test):

- Minimum 15 panellists (scalable to 50 for mass market)
- Must include: 30% SA, 30% SS, 30% HEL (overlap permitted)
- Gender ratio within 70/30 split relevant to target market
- Age distribution: 20% 18-25, 50% 26-45, 30% 46-60
- Geographic diversity: ≥3 different living environments (urban, suburban, rural)

B.5 Validation & Calibration Tasks

Pre-Qualification (Required):

1. Sensory Journal: 3-day tracking of reactions to everyday sensations (fabric textures, food textures, ambient sounds/smells)
2. Product Ritual Audit: Document current routine with pain points and adaptations
3. Calibration Test: Standardized assessment with control products (texture gradient swatches, scent strips, application tools)

Ongoing Calibration (Quarterly):

1. Re-assessment against standard references
2. Fatigue monitoring
3. Consistency validation

Disqualification Triggers:

1. Inconsistent responses to calibration controls (>30% variance)
2. Non-completion of >2 consecutive studies
3. Development of conditions affecting sensory perception
4. Evidence of panellist bias or secondary gain motivation

APPENDIX C: REFERENCE STANDARDS FOR SENSORY BAND CALIBRATION

EVIDENCE STATUS NOTE: The Sensory Band taxonomy is a pragmatic design heuristic developed through iterative consensus with neurodivergent expert panels. It is presented as a stable, testable framework for achieving sensory predictability. COSMETONOESIS recognizes the need for and is actively pursuing biometric validation studies (e.g., correlating bands with EEG, GSR, or fMRI data). These reference parameters represent our current best practice and will be updated annually with new findings.

C.1 Grounding Band (Low-Frequency, Attenuating, Regulating)

Core Principle: Provides consistent, predictable sensory input that downregulates nervous system arousal.

Cross-Category Specifications:

Category	Olfactory/Taste	Tactile	Visual	Application
Skin Care	Woody, earthy, vanilla, beeswax	Creams, balms, oils (5,000-50,000 cP)	Earth tones, opaque	Slow absorption, leaves protective film
Hair Care	Sandalwood, coconut, oat	Rich creams, butters, pre-shampoo oils	Creamy, opaque	Weighted feeling, nourishing without buildup
Oral Care	Chamomile, honey, rooibos	Low-foam, viscous pastes/rinses	Cream, light brown	Coating sensation, gentle clean
Body Care	Lavender, cedar, shea butter	Whipped textures, body butters	Pastel, matte	Warming massage, lingering emollience
Fragrance	Base-note dominant (vetiver, musk, amber)	N/A	Amber bottles	Close-to-skin silage, minimal projection

Avoid Across Categories: Citrus top notes, sharp greens, high-pitched florals, instant-dry textures, high-foam, astringency, glitter/sparkle, strong cooling (<15°C sensation).

C.2 Clarifying Band (High-Frequency, Differentiating, Focusing)

Core Principle: Provides distinct, non-overwhelming sensory input that promotes alertness and differentiation.

Cross-Category Specifications:

Category	Olfactory/Taste	Tactile	Visual	Application
Skin Care	Herbaceous, citrus, mint, tea tree	Gels, serums, micellar waters (100-5,000 cP)	Green, blue, clear	Fast absorption, matte finish
Hair Care	Rosemary, mint, citrus	Light gels, texturizing sprays, clarifying rinses	Clear, translucent	Volumizing, scalp-tingling, rinses clean
Oral Care	Spearmint, green apple, cucumber	High-foam, effervescent	Green, blue, clear	Refreshing, palate-cleansing

Category	Olfactory/Taste	Tactile	Visual	Application
Body Care	Eucalyptus, juniper, lemongrass	Cooling gels, dry oils, spray mists	Aqua, clear	Quick-dry, energizing
Fragrance	Top/middle note dominant (citrus, herbs, light florals)	N/A	Clear glass	Moderate projection, linear evolution

Avoid Across Categories: Heavy musks, gourmand notes, oily residues, slow absorption, extreme opacity, warming sensations (>32°C), lingering sweetness.

C.3 Neutral Band (Minimal Sensory Signature, Non-Interfering)

Core Principle: Minimizes sensory input to near-zero, designed for sensory avoidance or product layering.

Cross-Category Specifications:

Category	Olfactory/Taste	Tactile	Visual	Application
All Categories	Undetectable to ≥90% of panel	Mimics water or air (<100 cP)	Clear/colourless	Disappears completely within 60 seconds
Specific Tolerances:	<0.005% fragrance load	No drag, grab, or slip	100% transparent	No temperature change, no residue

Key Differentiator: Must be tested against both neurodivergent and neurotypical panels to ensure true neutrality (neurodivergent individuals often detect subtler stimuli).

C.4 Calibration Standards Library

Physical Reference Standards (Available to Licensees):

Code	Product Type	Band	Key Parameters
GRD-SK01	Face Moisturizer	Grounding	25,000 cP, sandalwood/oat scent, beige opaque
CLF-SK02	Face Serum	Clarifying	800 cP, rosemary/grapefruit, clear green
NTR-SK03	Toner	Neutral	15 cP, odourless, water-clear
GRD-HC01	Hair Mask	Grounding	Coconut/vanilla, rich cream, 40,000 cP
CLF-HC02	Scalp Treatment	Clarifying	Peppermint/tea tree, cooling gel, 1,200 cP

Code	Product Type	Band	Key Parameters
GRD-OC01	Mouthpaste	Grounding	Chamomile/honey, low-foam paste, 20,000 cP
CLF-OC02	Mouth Rinse	Clarifying	Cucumber/spearmint, effervescent, 5 cP

Digital Reference Library:

- GC-MS fragrance profiles for each band
- Rheology curves across temperature ranges
- Spectral reflectance/transmission data
- Application footage demonstrating target behaviour

C.5 Band Assignment Protocol

Step 1: Intended Band Declaration

Formulator declares target band with justification based on:

- Users need state (regulation vs. alertness)
- Time of day intended use
- Complementary products in routine

Step 2: Blind Panel Categorization

- Minimum 20 panellists (≥60% neurodivergent)
- Presented with product + 3 band reference standards
- "Which standard does this product feel most similar to?"

Step 3: Quantitative Sensory Analysis

- Intensity scoring (1-10) on 10 sensory attributes
- Must cluster with reference band profile
- Statistical analysis (PCA) to confirm grouping

Step 4: Real-World Validation

- 3-day in-context use
- Does product perform its band function? (e.g., Grounding product actually reduces anxiety)
- Alignment check: ≥75% report intended effect

Band Mismatch Resolution:

If product mis-categorized by >40% of panellists:

1. Reformulate to adjust dominant sensory attributes
2. Re-categorize to actual band with updated communication
3. In rare cases: create new sub-band with defined parameters

APPENDIX D: THE HONESTY ALIGNMENT & VERIFICATION PROTOCOL

D.1 Purpose & Scope

This appendix operationalizes **Article VIII: The Principle of Radical, Functional Honesty**. It provides the testing framework to ensure that every NICD-certified product's **communication, sensory cues, and performance align without deception, omission, or neurological betrayal.**

D.2 The Honesty Verification Method framework

Phase 1: Claim & Cue Deconstruction

Step 1.1: Promise Extraction

- List every explicit and implicit promise made by the product through:
    - Packaging text
    - Marketing claims
    - Sensory cues (colour, texture in tube/jar, scent through packaging if applicable)
    - Product name
    - Imagery
- **Output:** "Promise Map" document.

Step 1.2: Cue Intention Declaration

- For each sensory attribute, the formulator must declare its intended neurological purpose:
    - *Example:* "Pale yellow colour → visual cue for 'gentle creaminess' and 'lemon note'"
    - *Example:* "Spearmint oil at 0.05% → provides mild cool sensation (≤2/10 intensity) for focus cue, not for intense freshness"

Phase 2: Dual-Panel Verification

Panel H (Honesty Panel): Neurodivergent-Verified

- **Composition:** 15-20 neurodivergent individuals, screened per Appendix B.
- **Method:** Given **only the final product and its packaging**. No additional instructions.
- **Task:** Use product for 3-7 days. Complete daily log answering:
    1. "What did you expect based on the packaging?"
    2. "What did you actually experience?"
    3. "Was there any point where the product surprised you in a negative way?"
    4. "Rate the alignment between promise and experience: 1 (betrayed) to 5 (perfectly aligned)."
- **Success Metric:** ≥80% of panellists must rate alignment at 4 or 5.

Panel B (Blind Panel): Ground Truth Establishment

- **Composition:** 15-20 individuals (mixed neurotypes), **completely naïve** to the product and brand.
- **Method:** Given the **product in plain, unmarked container**. No packaging, no claims.
- **Task:** Use product. Then answer:
    1. "What is this product's main purpose, in your own words?"
    2. "What sensory band does it belong to? (Grounding/Clarifying/Neutral)"

3. "What is its dominant sensation (e.g., cooling, warming, creamy, light)?"
4. "Who do you think this is for?"

- Output: "Blind Perception Profile."

Phase 3: Alignment Analysis & "Honesty Gap" Scoring

The Honesty Gap Score (HGS) is calculated as follows:

1. Claim-to-Blind Alignment (CBA): Compare the brand's stated purpose/band from Phase 1 with Panel B's blind perception.
    - *Full alignment (band & purpose match)* = 0 points
    - *Partial alignment (band matches, purpose slightly off)* = 1 point
    - *Misalignment (wrong band or contradictory purpose)* = 3 points
2. Cue-to-Experience Alignment (CEA): Compare each declared sensory cue intention from Step 1.2 with Panel H's experienced reality.
    - For each cue (colour, texture, scent, taste, after-feel):
        - As promised = 0 points
        - Moderately different = 1 point
        - Deceptively different = 3 points
3. Omission Penalty (OP): Any significant negative experience reported by >20% of Panel H that was not warned about = 5 points per omission.

HGS Formula:
HGS = CBA + CEA + OP

Certification Threshold:

- HGS ≤ 2: NICD Honesty Certification (excellent alignment)
- HGS 3-5: Requires reformulation or recommunication
- HGS ≥ 6: Fails NICD certification

Phase 4: Transparency Documentation

For certified products, the following must be publicly available:

1. The Honesty Fact Sheet: A simple document showing:
    - Our Promise: [Core claim]
    - Our Sensory Design: [Band + key sensations]
    - What We Don't Promise: [Explicit limitation statement]
    - Who Should Be Cautious: [Clear allergy/avoidance warnings]
2. The "Why We Chose This" Statement: For any potentially controversial ingredient (e.g., a synthetic preservative, a known allergen), a brief, honest rationale accessible via QR code:
    - *Example:* "We include phenoxyethanol at 0.5% as our preservative. After testing 12 alternatives, this was the only one that prevented microbial growth without altering the sensory profile our neurodivergent panellists require."

D.3 Special Case: The "Negative Cue" Requirement

For products containing **known high-prevalence irritants or allergens** (e.g., propolis, certain essential oils, acids), **passive honesty is insufficient.** The product must contain a **deliberate, mild pre-application cue** that signals "caution" to sensitive individuals.

- **Example:** A propolis-containing paste might have a **subtle, characteristic propolis scent detectable upon opening** (not masked), serving as a natural identifier for those sensitive to it.
- **Example:** A product with exfoliating acids might have a **very slight, immediate tingle upon application** (within safe bounds) that signals "active" rather than hiding it behind numbing agents.

D.4 Annual Honesty Re-Audit

Because ingredients and manufacturing can drift, NICD certification requires **annual re-audit** of the Honesty Gap Score using the same protocol. Drift beyond thresholds results in loss of certification.

D.5 Integration with Other Appendices

- **Appendix A (Assessment Matrix):** Domain 5 "Transparent Complexity" now draws its data from the Honesty Audit.
- **Appendix B (Panel Screening):** Panel H members are drawn from the High Executive Load (HEL) and Sensory Avoider (SA) profiles, as they are most sensitive to promise-experience gaps.
- **Appendix C (Sensory Bands):** The Blind Panel (Panel B) results become the **empirical calibration** for whether a product truly belongs to its claimed band.

APPENDIX E: MANDATORY ATTRIBUTION AND AUDIT REPORTING FORMAT

This appendix defines the non-negotiable requirements for publishing or sharing the results of any NICD audit to ensure proper attribution and prevent misappropriation of the standard.

E.1 Required Attribution Statement

Any public communication, blog post, video, social media post, or report that shares the results, conclusions, or scores of an NICD audit **must** include the following boilerplate text in a clearly visible position:

"This assessment was conducted using the NICD Standard V3.1 and The ADHD Algorithm™ methodology, which are the intellectual property of COSMETONOESIS. The standard provides the technical framework for evaluating neuro-inclusive design. For more information on the standard or certification, visit www.cosmetonoesis.com."

E.2 Non-Compliance

Failure to adhere to the requirements in this appendix is a violation of the personal use license (Section 1) and may result in a public notice of copyright and trademark infringement from COSMETONOESIS.

END OF UNIVERSAL APPENDICES

These appendices constitute the cross-category implementation framework for Neuro-Inclusive Cosmetic Design. All product categories—skin care, hair care, oral care, body care, colour cosmetics, and fragrance—must be evaluated against these universal criteria, with category-specific adjustments as noted.