

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF ILLINOIS

EASTERN DIVISION

NORTHWESTERN MEMORIAL HEALTHCARE,

an Illinois nonprofit corporation,

Plaintiff,

v.

EXCEL DRYER, INC., a Massachusetts corporation,

UL SOLUTIONS INC., a Delaware limited liability company,

SMART EPD LLC, a Virginia limited liability company,

ANNA LASSO, individually,

SGS NORTH AMERICA INC., a Delaware corporation,

Defendants.

Case No. _____

COMPLAINT

JURY TRIAL DEMANDED

Plaintiff Northwestern Memorial HealthCare ("NMH" or "Plaintiff"), by and through its attorneys, brings this Complaint against Defendants Excel Dryer, Inc. ("Excel"), UL Solutions Inc. ("UL"), Smart EPD LLC ("SmartEPD"), Anna Lasso, and SGS North America Inc. ("SGS"), and alleges as follows:

I. INTRODUCTION

A. The Test

1. The claims made in this case can be verified effortlessly by anyone in a few minutes. They can be experienced directly, without scientific equipment, without expert testimony, without specialized knowledge. Visit any public restroom equipped with an electric hand dryer claiming compliance with or certified by the NSF P335 or UL PCR standards. Wash your hands. Place them in the dryer for 15 seconds—the least stringent drying time standard among all claims made by the Defendants. We begin by giving them the benefit of the doubt. Observe three things: (1) Watch where the water goes as it leaves your hands. (2) Remove your hands at 15 seconds. They will be visibly and obviously wet. (3) Look at the walls and floor near the dryer's air outlet. Note the growing mold, dirt and water staining originating from that point.

B. The Hypothetical

2. All aspects of hand dryer performance can be understood if you remove it from the room. Does a dryer improve or degrade the room by being there?



C. The Stakes

3. This case arises in a healthcare setting where the consequences of contamination are not merely inconvenient but potentially lethal. Northwestern Memorial Hospital is one of the nation's premier academic medical centers, treating patients whose

immune systems have been deliberately suppressed for organ transplants, whose bodies are fighting cancer, whose surgical wounds are healing, whose newborns are developing in neonatal intensive care. For these patients, bacterial and fungal contamination is not a nuisance—it is a life-threatening event.

4. Plaintiff operates a healthcare system serving hundreds of thousands of patients annually. Plaintiff's Infection Control Board—the institutional body specifically charged with preventing the transmission of pathogens within the hospital—is responsible for equipment decisions that affect patient safety. When that Board selects hand drying equipment, it relies on manufacturer representations and third-party certifications to make informed decisions. That reliance was betrayed.
5. Over 120 XLERATOR hand dryers manufactured by Defendant Excel are installed at Northwestern Memorial Hospital's main campus. Additional installations were planned for Plaintiff's Lake Forest campus and Northwestern Organ Transplant Clinic in Joliet, Illinois. Every use of these devices exposes patients, visitors, and staff to conditions Defendants knew, or should have known, were harmful. In a hospital serving immunocompromised patients, contamination amplification is not an inconvenience—it is a betrayal of the fundamental duty of care.

D. The Product Excel Sold

6. Defendant Excel marketed its XLERATOR hand dryer to Plaintiff with specific claims: "Dries hands completely in 8 seconds." "The most hygienic hand drying solution." "The most hygienic hand drying solution for healthcare facilities." "80% less energy than conventional hand dryers." "95% cost savings compared to paper towels." These claims were false when made, remain false today, and were known or should have been known to be false by Excel at the time of sale.
7. Excel claims 8-second drying. Independent testing of 460 drying cycles established that zero percent achieve the NSF P335 specification of 0.1 grams residual moisture at 8 seconds. At 8 seconds, residual moisture averages 2.97 grams—2,870% above

specification. The actual time required to approach certification thresholds is 70 to 90 seconds. Excel's drying time claim is false by 775 to 1,025 percent.

8. Excel claims "hygienic" hand drying—and specifically markets to healthcare facilities with claims of superior hygiene. Independent testing of 136 hand dryers established that 100% amplify bacterial and fungal contamination compared to ambient air. The median amplification factor is 49.6 to 110.5 times ambient levels. The probability of 136 consecutive tests showing amplification under the null hypothesis is less than 10^{-41} . Excel's hygiene claim is not merely false—it is the opposite of true. Products marketed as "the most hygienic hand drying solution for healthcare facilities" amplify contamination in facilities where contamination can kill.
9. Excel claims energy savings. Because Excel's energy calculations are predicated on the false 8-second drying time, they are mathematically invalid. Energy consumption equals power multiplied by time. At actual drying times of 70-90 seconds, XLERATOR energy consumption is 7 to 10 times higher than claimed. The environmental advantage over paper towels disappears entirely at actual operating times.
10. Excel claims HEPA filtration provides protection. Independent testing established that HEPA-filtered and non-HEPA-filtered hand dryers show statistically identical microbial amplification ($p = 0.803$). The filter addresses intake air while ignoring the primary contamination pathway: bacteria and fungi amplified from interior surfaces and dispersed onto users. In a healthcare setting, the false promise of HEPA protection is particularly dangerous—it induces reliance on a safeguard that does not exist.
11. Excel's own data confirms these findings. The UL Product Category Rules for Hand Dryers, published July 2016, contains Figure 2 showing that at 8 seconds, residual moisture is 0.456 grams—82% above UL's own threshold and 356% above NSF

P335. Excel held four of ten manufacturer seats on the committee that published this data. Excel knew 8-second drying was physically impossible.

12. Denis Gagnon, Excel's President and CEO, testified under oath in federal court proceedings that XLERATOR drying time was 12 seconds—not the 8 seconds Excel markets today. Excel's own executive contradicted, under penalty of perjury, the company's current marketing claims.

E. The Reliance

13. In approximately 2010, Plaintiff undertook a major hospital refurbishment program that included upgrades to restroom equipment. Plaintiff's facilities engineering team consulted with Plaintiff's Infection Control Board—the institutional body specifically charged with preventing the transmission of pathogens within the hospital—regarding hand drying equipment selection.
14. Excel, through its representatives and marketing materials, made specific representations to Plaintiff regarding the XLERATOR's performance, hygiene, energy efficiency, and cost savings. Excel represented that XLERATOR was "the most hygienic hand drying option" for healthcare facilities. Excel represented that XLERATOR provided superior hygiene compared to paper towels. Excel supported these representations with certifications issued by Defendants UL, SmartEPD, and SGS.
15. Relying on Excel's representations and the supporting certifications, Plaintiff's Infection Control Board concluded that XLERATOR was "the most hygienic hand drying option" for the hospital. Based on this conclusion, Plaintiff installed over 120 XLERATOR hand dryers at Northwestern Memorial Hospital's main campus.
16. Following installation, Excel featured Plaintiff prominently in a marketing case study published on Excel's website. The case study uses Plaintiff's name, the endorsement of Plaintiff's Infection Control Board, and Plaintiff's institutional

credibility to market XLERATOR to other healthcare facilities. Excel quotes Plaintiff's staff praising the product's hygiene benefits—benefits that do not exist.

17. Excel used Plaintiff's endorsement to counter what Excel characterized as "scare tactics" regarding hand dryer hygiene in healthcare settings. Plaintiff's institutional credibility—built over decades of medical excellence—was weaponized to dismiss legitimate concerns about the very contamination amplification that independent research has now confirmed. Plaintiff did not consent to having its name used to suppress public health warnings.

18. Plaintiff's reliance was reasonable. When a manufacturer makes specific healthcare hygiene claims supported by certifications from nationally recognized testing laboratories, a hospital's Infection Control Board is entitled to trust those claims. When those claims are false, and those certifications are the product of captured standards and self-dealing, the manufacturer and certifiers bear responsibility for the resulting harm to patients, visitors, and staff.

F. The Enablers

19. Excel's false claims did not achieve credibility in isolation. They were enabled by a network of certification bodies that lent their institutional authority to representations they never verified. The certifications that induced Plaintiff's Infection Control Board to approve these products were the product of an ecosystem designed to validate rather than verify.

20. Defendant UL Solutions created the Product Category Rules for Hand Dryers in July 2016. The committee that created this standard consisted of 10 manufacturer representatives and 2 UL employees. Zero public health officials. Zero consumer representatives. Zero independent researchers. Zero hospital infection control specialists. Excel held four of ten manufacturer seats. William Gagnon of Excel chaired the committee. The standard-setters were the parties whose products would be measured against the standard.

21. The UL PCR established a 0.25 gram residual moisture threshold—2.5 times weaker than NSF P335's 0.1 gram threshold. This weaker standard was adopted after NSF rejected Excel's proposal to change NSF P335 from 0.1 grams to 0.2 grams. When Excel could not weaken one standard, it helped create a weaker one.
22. From 2017 to 2022, UL Environment certified Excel's XLERATOR at 8-second drying time and 3.68 Wh energy consumption—specifications that UL's own Figure 2 data showed were physically impossible. UL certified claims its own published data contradicted.
23. Defendant Anna Lasso worked at UL Environment from 2016 to 2022 as Product Manager of EPDs and PCR Project Manager. In this role, she worked directly with William Gagnon as he chaired the PCR committee. Her published article documents: "The PCR development process was initiated by William Gagnon, Excel Dryer's vice president of marketing and sales... William was asked to serve as chairman of the PCR committee, working closely with me and other leading manufacturers."
24. In April 2022—the same month Hokwang received a UL EPD—Anna Lasso formed EPD USA LLC, later renamed Smart EPD LLC. In July 2022, Excel's UL certification expired and was not renewed. In June 2023, Anna Lasso's company certified Excel at the identical specifications UL had allowed to lapse: 8-second drying time, 3.68 Wh energy consumption.
25. On the SmartEPD certificate, Anna Lasso appears in three roles: Program Operator, Independent Critical Reviewer, and Independent External Verifier. ISO 14025 requires these functions to be independent. One person occupies all three roles on certificates she issues for products manufactured by companies she worked with while developing the underlying standard.
26. Defendant SGS tested Excel's products in 2012 using "a revised version of NSF Protocol P335"—a standard NSF had rejected. SGS tested at 12 and 15 seconds, not the 8 seconds Excel markets. SGS reported 0.186 grams residual moisture at 12

seconds; independent testing documents 2.5 to 3.0 grams at the same interval—a discrepancy of 1,350 to 1,600 percent.

27. The certification network functioned as designed: manufacturers controlled the standards, certifiers validated the claims, and purchasers like Plaintiff's Infection Control Board relied on the apparent independence of the process. The independence was illusory. The certifications were worthless. The reliance was betrayed.

G. The Continuing Harm

28. The harm to Plaintiff is ongoing. SmartEPD Certificate No. SmartEPD-2023-002-0006-01 remains active through June 23, 2028. Excel continues to market false drying time and hygiene claims to healthcare facilities. Excel continues to use Plaintiff's name and Infection Control Board endorsement in marketing materials. Every day that Plaintiff's XLERATOR units remain in service, Plaintiff's patients are exposed to conditions Defendants knew or should have known were harmful.
29. For immunocompromised patients—cancer patients undergoing chemotherapy, organ transplant recipients on immunosuppressive drugs, surgical patients with healing wounds, neonates in intensive care—exposure to bacterial and fungal contamination at 50-110 times ambient levels presents serious risk. These are not theoretical harms. These are patients whose bodies cannot fight infections that healthy individuals would easily survive. The contamination amplification documented in independent research is precisely the exposure these patients cannot afford.
30. Plaintiff continues to suffer reputational harm. Excel's marketing materials remain in circulation. Plaintiff's Infection Control Board endorsement continues to be used to sell products to other healthcare facilities. Plaintiff's institutional credibility—the credibility of a premier academic medical center—continues to be exploited to promote products that amplify contamination in healthcare settings.

31. The defect is the design itself. No repair, no maintenance, no user technique can make these products perform as certified. The physics does not negotiate. The only remedy is removal and replacement with equipment that actually dries hands hygienically—a solution as simple as white paper towels, which achieve complete drying in 10-15 seconds, introduce no contamination, cause no mold colonization, and cost the same as hand dryers at actual operating times.

II. PARTIES

A. Plaintiff

32. Plaintiff Northwestern Memorial HealthCare is an Illinois nonprofit corporation with its principal place of business at 251 East Huron Street, Chicago, Illinois 60611. NMH is the parent entity that owns and operates hospitals under the Northwestern Medicine brand, including Northwestern Memorial Hospital, one of the country's premier academic medical centers affiliated with Northwestern University's Feinberg School of Medicine.

B. Defendant Excel Dryer, Inc.

33. Defendant Excel Dryer, Inc. is a Massachusetts corporation with its principal place of business at 357 Chestnut Street, East Longmeadow, Massachusetts 01028. Excel manufactures, markets, distributes, and sells XLERATOR brand hand dryers throughout the United States, including in Illinois.

C. Defendant UL Solutions Inc.

34. Defendant UL Solutions Inc. is a Delaware limited liability company with its principal place of business at 333 Pfingsten Road, Northbrook, Illinois 60062. UL created the Product Category Rules for Hand Dryers on July 13, 2016. The PCR establishes a 0.25 gram residual moisture threshold—2.5 times weaker than NSF P335. The UL PCR committee consisted of 10 manufacturer seats and 2 UL representatives. Excel Dryer held 4 of 10 manufacturer seats: William Gagnon,

Denis Gagnon, Tom Koetsch, and Peter Panaratos. William Gagnon, Excel's VP and COO, chaired the committee. From 2017 to 2022, UL Environment issued Environmental Product Declaration No. 4787137936.102.1 certifying Excel's XLERATOR Hand Dryer with specifications—8-second drying time and 3.68 Wh energy consumption—that UL's own PCR Figure 2 data proved were physically impossible.

D. Defendant Smart EPD LLC

35. Defendant Smart EPD LLC is a Virginia limited liability company, entity ID 11379451. Smart EPD LLC was formed on April 26, 2022, under the name "EPD USA LLC." On July 6, 2022, articles of amendment changed the company name to "Smart EPD LLC." On June 23, 2023—eleven months after UL Environment's EPD for Excel expired without renewal—Smart EPD issued Environmental Product Declaration No. SmartEPD-2023-002-0006-01 for Excel Dryer's XLERATOR hand dryer with specifications identical to the expired UL certificate: 8-second drying time and 3.68 Wh energy consumption.

E. Defendant Anna Lasso

36. Defendant Anna Lasso is an individual residing in Virginia. From 2016 to 2022, Anna Lasso was employed by UL Environment as Product Manager of EPDs and PCR Project Manager. In this role, she worked directly with William Gagnon as he chaired the UL PCR committee. On SmartEPD certificates, Anna Lasso appears in three roles: Program Operator, Independent Critical Reviewer, and Independent External Verifier. ISO 14025 requires these functions to be independent of one another. Anna Lasso occupies all three roles on certificates she issues for products manufactured by companies she worked with while developing the underlying standard.

F. Defendant SGS North America Inc.

37. Defendant SGS North America Inc. is a Delaware corporation with its principal place of business at 201 Route 17 North, Rutherford, New Jersey 07070. SGS

Performance Test Report No. 2774929EFF-001, dated September 7, 2012, documented hand dryer testing at drying times of 12 and 15 seconds—not the 8 seconds manufacturers claim in marketing.

III. JURISDICTION AND VENUE

38. This Court has subject matter jurisdiction pursuant to 28 U.S.C. § 1332(a) because there is complete diversity of citizenship between Plaintiff and all Defendants, and the amount in controversy exceeds \$75,000, exclusive of interest and costs.

39. This Court has personal jurisdiction over all Defendants. Defendant Excel conducts substantial business in Illinois. Defendant UL Solutions is headquartered in Illinois. Defendants SmartEPD, Anna Lasso, and SGS have purposefully directed their certification and testing activities toward the national market, including Illinois.

40. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b) because a substantial part of the events giving rise to Plaintiff's claims occurred in this District and Defendant UL Solutions is headquartered in this District.

IV. FACTUAL ALLEGATIONS

A. Excel's Products and Marketing Claims

41. Defendant Excel manufactures and sells the XLERATOR line of commercial hand dryers. Excel markets these products to commercial and institutional purchasers, including healthcare facilities, with specific claims regarding drying time, hygiene, energy efficiency, cost savings, and environmental impact.

42. Excel claims its XLERATOR hand dryers dry hands "completely in 8 seconds" or "10 seconds." This claim is false. Independent scientific testing of 409 drying cycles across multiple time intervals established that zero percent of hand dryer uses achieve the claimed dryness at the claimed times. At Excel's claimed 8-second drying time, hands retain approximately 3.5 to 4.0 grams of residual moisture—35 to

40 times the 0.1 gram specification established by NSF Protocol P335 for "dry hands."

43. Excel's own data confirms the impossibility of its drying time claims. The UL Product Category Rules for Hand Dryers, published in July 2016, contains Figure 2 on page 35, which shows that at 8 seconds of drying time, residual moisture is 0.456 grams. This data was approved by a committee on which Excel held four of ten manufacturer seats. Excel's own committee-approved data proves that 8-second drying is impossible even under Excel's preferred testing methodology.
44. Excel claims its XLERATOR hand dryers provide "a hygienic hand drying solution" and are "the most hygienic hand drying solution for healthcare facilities." These claims are false. Independent scientific testing established that 100% of tested hand dryers—136 of 136 units across two studies—amplify bacterial and fungal contamination compared to ambient air. The median amplification factor is 49.6 to 110.5 times ambient contamination levels. The probability that this result occurred by chance is less than one in ten to the forty-first power ($p < 10^{-41}$).
45. Excel claims its XLERATOR hand dryers use "80% less energy than conventional hand dryers" and provide "95% cost savings when compared to paper towels." These claims are false because they are predicated on the false 8-second drying time.
46. Excel markets optional HEPA filtration with claims that they "remove 99.999% of viruses" and "99.97% of potentially present bacteria." These claims are misleading. HEPA-filtered hand dryers and non-HEPA hand dryers produced statistically indistinguishable contamination output ($p = 0.803$). The HEPA filter addresses intake air, but contamination originates downstream.

B. Excel's Relationship with Plaintiff

47. In approximately 2010, Plaintiff undertook a major hospital refurbishment program that included upgrades to restroom equipment. Plaintiff's facilities engineering

team consulted with Plaintiff's Infection Control Board regarding which hand drying option would be most hygienic for a healthcare environment.

48. Excel, through its representatives and marketing materials, made specific representations to Plaintiff regarding the XLERATOR's hygiene, drying time, energy efficiency, and cost savings. Excel represented that XLERATOR was "the most hygienic hand drying solution for healthcare facilities."
49. Relying on Excel's representations, Plaintiff's Infection Control Board concluded that XLERATOR was "the most hygienic hand drying option" for the hospital. Based on this conclusion, Plaintiff installed over 120 XLERATOR hand dryers at Northwestern Memorial Hospital's main campus.
50. Following installation, Excel featured Plaintiff prominently in a marketing case study published on Excel's website. The case study uses Plaintiff's name, the endorsement of Plaintiff's Infection Control Board, and quotes from Plaintiff's Director of Facilities Engineering to market XLERATOR products to other healthcare facilities nationwide.
51. Excel used Plaintiff's endorsement to counter what Excel characterized as "scare tactics" regarding hand dryer hygiene in healthcare settings. Plaintiff did not consent to having its institutional credibility used to market products that amplify contamination.

C. The Scientific Evidence

52. Independent scientific research has definitively established that Excel's claims are false. This research comprises eleven peer-reviewed preprint studies conducted between September 2023 and December 2025, with data archived at Zenodo and Harvard Dataverse. These are not "studies that suggest" or "evidence that indicates." These are physical facts established to scientific certainty.
53. Drying Time Failure: Independent testing of 409 drying cycles established that zero percent of hand dryer uses achieve the NSF P335 specification of 0.1 grams

residual moisture at manufacturer-claimed drying times. At Excel's claimed 8-second drying time, hands retain approximately 3.5 to 4.0 grams of moisture—2,675% above specification. First compliance with the 0.1 gram specification occurs at 70 to 90 seconds. Blouch, R.A. Jr. (2025), Testing the Validity of Hand Dryer Drying Time Specifications, DOI: 10.5281/zenodo.15503698; Blouch, R.A. Jr. (2025), Systematic Performance Failure in Commercial Hand Dryers, DOI: 10.5281/zenodo.17858443.

54. Microbial Amplification: Independent testing of 136 hand dryers across two studies established that 100% of units amplify bacterial and fungal contamination compared to ambient air. The median amplification factor is 49.6 to 110.5 times ambient levels. The probability that this result occurred by chance is $p < 10^{-41}$. By contrast, white paper towels tested as statistically indistinguishable from ambient air ($p = 0.192$). Blouch, R.A. Jr. (2025), Transmission of Bacteria and Fungus via Dyson and Xlerator Hand Dryers, DOI: 10.5281/zenodo.15504115; Blouch, R.A. Jr. (2025), Validation of Hand Dryer Microbial Amplification, DOI: 10.5281/zenodo.17859894.

55. Water Dispersal: High-speed video documentation established that dispersal-type hand dryers spray water at high velocity in all directions during every use. Each use disperses 7.3 grams of indeterminately clean/dirty water into the restroom environment. Patrick et al. established that wet hands transfer up to 500 times more bacteria than dry hands. Excel's products leave hands wet at claimed drying times, creating the precise condition the research warns against—then amplify the contamination and disperse it throughout the room. Blouch, R.A. Jr. (2025), Visual Analysis of Water Dispersion Patterns, DOI: 10.5281/zenodo.15503304.

56. Mold Colonization: Evaluation of 126 restrooms established that 100% of dispersal-type hand dryer installations (50 of 50) exhibited visible mold colonization on adjacent walls and floors, compared to 0% of paper towel dispenser installations (0 of 50). Independent EPA-certified laboratory analysis confirmed fungal presence:

Aspergillus, Penicillium, Alternaria, Cladosporium, and Chaetomium. Blouch, R.A. Jr. (2025), The Wandering Plume of Filth, DOI: 10.5281/zenodo.17860971.

57. Energy and Environmental Claims: Because Excel's energy and carbon calculations are predicated on the false 8-second drying time, they are mathematically invalid. If actual drying time is 70 to 90 seconds, actual energy consumption is approximately 17 watt-hours per use, not the 1.7 watt-hours Excel claims. Blouch, R.A. Jr. (2025), An Empirical Refutation of Green Energy Claims, DOI: 10.5281/zenodo.17859198.

58. The Bimodal Mechanism: Water on hands exists in two forms: "loose water" (surface water) and "bound water" (water held by capillary action). Loose water disperses rapidly in 5 to 12 seconds. Bound water resists removal regardless of air velocity. No amount of air velocity changes this physical constraint. Physics does not negotiate. Blouch, R.A. Jr. (2025), Catastrophic Time-To-Dry Failures, DOI: 10.5281/zenodo.17869567.

D. Unbinding Mixed Law

59. This case does not ask the Court to impose liability on certifiers for defective products. That question is settled. Certifiers do not manufacture products. When a certified product fails due to manufacturing defect, the manufacturer is liable. That is not being contested.

60. Plaintiff invokes a different doctrine: certifiers bear independent liability for the certifications they issue. This is not derivative of manufacturer conduct. It is primary liability for the certifier's own representations. See Restatement (Second) of Torts § 552 (negligent misrepresentation); § 324A (voluntary undertaking).

61. Defendants authored the standards. Defendants designed the test methods. Defendants controlled the protocols. Defendants issued the certifications. Every element was within Defendants' exclusive control. There is no intervening party to whom fault can be allocated. Defendants bear sole responsibility for the accuracy of certifications bearing their marks.

62. Defendants certified specifications. Independent research tested those specifications. 460 residual moisture trials. Zero compliance at certified times. Residual moisture of 2.5 to 3.0 grams when defendants certified 0.1 to 0.25 grams. Bacterial amplification of 50-110× when defendants certified products as "hygienic." Visible mold colonization in 100% of installations when defendants certified HEPA filtration as protective.

63. Every certified specification is proven false. The independent research data is fully public. Plaintiff's methodology is fully documented. Defendants' underlying test data is not.

64. Independent research has established a prima facie case that Defendants' certified specifications are false. The burden now shifts to Defendants to present evidence that their certifications are accurate. Absent such public evidence, no genuine dispute of material fact exists.

E. The Science Is The Product

65. 150 years of universal scientific consensus that wet hands spread disease is the reason hand dryers exist. Washing hands exists to reduce microorganism count. Drying hands exists to reduce microorganism transfer.

66. This is foundational to the products. Defendants certified and subsequently built an entire industry on this science. Every marketing claim assumes it. Every certification standard incorporates it. Every sale depends on it.

67. Semmelweis established the importance of hand hygiene in 1847. Patrick et al. established that wet hands transfer up to 1,000 times more bacteria than dry hands in 1997. Defendants cite this research in their own marketing. They use the science to sell the products. They are bound by the science when the products fail. They cannot claim ignorance of the science. That is the reason these products exist.

F. The Mark Is A Contract

68. Underwriters Laboratories has spent 130 years building one of the most recognized consumer safety brands in the world. The UL mark appears on 22 billion products annually. It is designed to be seen by consumers at the point of purchase and the point of use. It communicates a single message: this product has been tested and found safe.
69. UL did not build this brand by accident. UL built it through deliberate consumer-facing marketing. The UL mark functions identically to the Nike swoosh or the Good Housekeeping Seal—it is brand advertisement directed at the purchasing public designed to generate a buying impulse. Consumers do not read UL's testing protocols. Consumers see the mark and trust it. That trust is the product UL sells.
70. The UL mark is not merely a representation—it is a contract. Every element of formation is present. Offer: The mark communicates a specific promise—this product has been tested and meets published standards. Acceptance: Consumer purchase of a product bearing the mark constitutes acceptance. Consideration: Certification fees are embedded in product pricing. Consumers pay those fees with every purchase. Mutual Assent: 130 years of deliberate, consumer-facing brand development admits of no other interpretation.
71. UL has been given a special relationship with Federal Regulatory Agencies under 29 CFR § 1910.7—Definition and requirements for a nationally recognized testing laboratory. UL remains an OSHA-recognized NRTL. OSHA permits employers to rely on UL certification to satisfy federal workplace safety requirements. The UL mark carries regulatory weight. UL cannot disclaim responsibility to consumers while holding quasi-regulatory authority over workplace safety.
72. *Hanberry v. Hearst Corp.*, 276 Cal. App. 2d 680, 685 (1969), held that one who endorses products for economic gain owes a duty of care to consumers who rely on that endorsement: "Having voluntarily involved itself into the marketing process, having in effect loaned its reputation to promote and induce the sale of a given

product... public policy imposes upon it the duty to use ordinary care in the issuance of its seal and certification of quality so that members of the consuming public who rely on its endorsement are not unreasonably exposed to the risk of harm."

73. Defendants did not build consumer-facing marks by accident. They did not spend decades marketing trustworthiness to the purchasing public by oversight. Every element of the certifier business model—the visible mark, the consumer-directed marketing, the promise of "protection," the cultivation of trust—was engineered to create consumer reliance. Defendants built the relationship. Defendants profited from the relationship. Defendants are bound by the relationship.

74. The mark is the contract. The certification is the breach.

G. The Standard Is Indivisible

75. A drying standard for a product whose sole purpose is reducing microbe transmission is a hygiene standard. These two things cannot be separated. Hands must leave the device as clean or cleaner than when they entered. This is not controversial.

76. You cannot write a testing standard for a product that exists solely for the purpose of reducing microbe transmission without fully owning the entire microbe transmission properties of the entire product use cycle.

77. Defendants certified drying time. They clearly state what happens when drying fails—wet hands spread contamination.

78. Defendants have created no standard to measure the microbial content of the output jets of functioning dryers in situ. This failure provides for output air that amplifies ambient restroom air contamination 50-110×.

79. Defendants certified "hygienic" hand dryers. These dryers colonize the walls around them with mold in 100% of installations.

80. Defendants created standards addressing one part of the product cycle while ignoring the rest. NSF P335 Section 6.2 requires HEPA filtration to prevent contaminated air intake—while ignoring that contamination must be occurring downstream of the filter. The UL PCR mentions hygiene once in 35 pages. Water dispersal—the primary mechanism by which these products affect public health—is not mentioned at all.
81. It is not reasonable to believe these omissions are oversights. They fit the model of liability engineering. Defendants wrote standards that address what manufacturers wanted addressed and ignore what manufacturers wanted ignored rather than testing the claims manufacturers make for the entire device use cycle.
82. That is not safety certification. That is regulatory capture. Defendants wrote the standards. Defendants certified the products. Defendants own the outcomes.

H. Scientific Consensus Compels Judicial Action

83. Courts began addressing tobacco-related harms when the science became unequivocal. Decades of industry denial collapsed under the weight of unanimous research. Judicial intervention followed scientific consensus.
84. Hand hygiene science presents a far stronger case than even the best second hand smoke science: The science establishing that hand drying prevents disease transmission has never been disputed. Researchers, Public Health authorities and the Defendants themselves cite this science in their standards creation and in marketing. These products would not exist except for this science as their sole purpose is to reduce microbial transfer after hands are washed.
85. The science establishing that hand dryers amplify contamination has accumulated for 36 years across 18 peer-reviewed studies. Every study done on hand dryers in functioning restrooms shows the same result, with no contradicting studies in the literature.

86. Plaintiff declares that the weight of prior science combined with Plaintiff's empirical research establishes a prima facie case that Defendants' certified specifications are false. The burden shifts to Defendants to produce evidence—using Plaintiff's publicly documented methodology—demonstrating their certifications are accurate.

87. The science justified the product's invention. The science now condemns its failure.

I. The Liability Position

88. Defendants established residual moisture thresholds as safety standards. NSF set 0.1 grams. UL set 0.25 grams. These thresholds exist because Defendants determined that exceeding them was harmful. Leaving water on hands after drying was not permitted by their own self-selected standards.

89. If exceeding those thresholds causes harm, then Defendants certified products that exceed the thresholds by 1,000 to 2,770 percent, and every use of every certified product exposes users to conditions Defendants themselves defined as harmful.

90. If exceeding these thresholds does not cause harm, then Defendants' standards are arbitrary and meaningless, and Defendants collected certification fees and enabled premium pricing for compliance with standards that protect nothing.

91. Both positions establish liability.

92. If Defendants argue their standards were unachievable, they confirm that the thresholds define meaningful harm—harm their certified products inflicted with every use. If Defendants argue their standards were meaningless, they expose the certifications as fraud. Either position renders the certification fees unjustified and the resulting exposures compensable.

93. This is not a case about products that marginally underperform specifications. This is a case about a certification ecosystem that was systematically restructured—through committee capture, standard weakening, and revolving-door self-dealing—

to certify products that could not be certified under legitimate standards. The physics never changed. The standards did.

J. Defendants' Cited Claims Analysis

94. Purpose

95. Defendant Anna Lasso as committee chair and verifier of the TrueNorth Collective Comparative Life Cycle Assessment of Hand Drying Systems: Excel Hand Dryers and Paper Towel Systems (May 2023) states on page 16, "The purpose of [Excel hand dryers] is to dry hands after washing in a public restroom."

96. Defendant Underwriters Laboratories states on page 9 of its UL Product Category Rules for Hand Dryers (2016), "The function of a hand dryer is to dry hands after washing in a public restroom."

97. Defendant NSF International in its Protocol P335: Hygienic Commercial Hand Dryers (April 2007), section 1.2 states, "Commercial hand dryers are commonly used in public or commercial hand washing stations to dry hands after hand washing."

98. Defendant SGS International states in Annex A of its Performance Test Report No. 2774929EFF-001 (Sept. 7, 2012), "The purpose of this test is to ensure that the hand dryer is able to thoroughly dry hands during one 15-sec operating cycle."

99. The purpose of drying hands is to reduce the transmissibility of disease spreading organisms after washing hands to clean them. Hand washing and drying are supported by 150 years of unequivocal science proving that both together reduce disease individually and in populations.

100. Drying Time

101. Defendant Anna Lasso states in the SmartEPD Environmental Product Declaration: XLERATOR Hand Dryer, Registration No. SmartEPD-2023-002-0006-01 (2023), "The XLERATOR dries hands completely in 8 seconds." Also, "Tests were performed by SGS International on standard XLERATOR Hand Dryer with 0.8" nozzle

to 0.25g or less of residual moisture, pursuant to the UL Environment Global Product Category Rules (PCR) for Hand Dryers."

102. Defendant SGS International states in its Performance Test, "The purpose of this test is to ensure that the hand dryer is able to thoroughly dry hands during one 15-sec. (± 1 sec.) operating cycle. 'thoroughly dry' means that less than 0.1 grams of residual moisture per hand for a total of 0.2 grams or less is recovered when a user dries his or her hands on a paper towel after using the hand dryer."
103. Defendant NSF International in its P335, Section 4.3.3 states, "The unit must dry the user's hands to a satisfactory level (0.1 gram of residual moisture) within a period of one normal operating cycle or 15 seconds, whichever is lower."
104. Defendant UL Solutions provides a standardized method for establishing drying time and residual moisture levels in Appendix II of its PCR, stating elsewhere, "Dry Time: After washing the hands, the length of time required to dry one's hands to a dryness threshold equaling 0.25 grams residual moisture or less using a hand dryer."
105. The time-to-dry of a hand dryer determines several important factors in how the product works, or does not work. Long dry times decrease compliance with users leaving the room with wet hands. Long dry times increase unit energy use per dry. Long dry times increase the carbon footprint of the product. Long dry times expose the user to increased bacterial and fungal loads.
106. Hygiene
107. Anna Lasso states in the Smart EPD Excel EPD, "The XLERATOR Hand Dryer is a touchless, hygienic way to dry hands." She states in the TrueNorth LCA that "hygiene is part of the protocol for commercial hand dryers" and then, oddly, in the same document, states, "Although hygiene is another purpose for hand dryers that is of interest to the scientific community (Materials Systems Laboratory, 2011), hygiene is not considered in this study."

108. UL makes a single statement in the entire PCR regarding hygiene: "Hand dryers are electric devices used to provide a hygienic method to dry hands in public washrooms."
109. NSF states in the P335, "Additionally, if a hand dryer insufficiently dries the user's hands, the residual moisture remaining on the user's hands could facilitate transmission of transient microorganisms to and from other objects and people after leaving the machine" and "Commercial hand dryers can promote distribution of potentially pathogenic bacteria and allergenic mold spores or recontaminate hands with bacteria and molds during drying."
110. SGS entirely fails to mention hygiene anywhere in its test report.
111. Hand dryers are the direct result of a lineage of continuous science extending for 150 years that, without exception, proves that washed and dried hands decrease death and disease. The scientific consensus on this subject far exceeds the science on second hand cigarette smoke, already well established in the courts as causal for disease even without proof of downstream harm.
112. Water Dispersal
113. Defendant Anna Lasso fails to mention in the 51 pages of the Smart EPD Xlerator Certificate and the TrueNorth Collective LCA a single word about the dispersal of water into the room after the dryer air jets strike it.
114. In the 37 pages of its Product Category Rules, Defendant UL Solutions says nothing about the water that leaves hands after the dryer air-jets strike it. In Appendix 2, instructions for testing residual water, Defendant states, "Move hands slowly and evenly through the air stream in order to blow off large water droplets," acknowledging that there are water droplets involved in the process.
115. NSF International created specifications for water in capture-type hand dryers but does not mention anywhere in the 11 pages of its Protocol P335 what

occurs, or should occur, to the water after the air-jets strike it in a dispersal-type dryer.

116. SGS International fails to mention anything about the destination of water struck by the air jets in its Performance Test Report.
117. In a product whose single purpose, its literal reason for existing, is to remove water from wet hands it is impossible to believe that the several certifying bodies writing the design, build, and testing standards for the products—and the manufacturers who make and sell them—completely fail to mention the destination and management of the water on hands after the dryer air strikes it. Water dispersal is the final stage of the product operational cycle and it has been entirely ignored.
118. Plume of Filth
119. Anna Lasso provides no standard in the 51 pages of the SmartEPD certificate and TrueNorth LCA for addressing the persistent mold growth found under 100% of public restroom hand dryers, failing to acknowledge the problem exists.
120. UL provides no standard in the 37 pages of its PCR for addressing the persistent mold growth found under 100% of public restroom hand dryers, failing to acknowledge the problem exists.
121. NSF provides no standard in the 11 pages of P335 for addressing the persistent mold growth found under 100% of public restroom hand dryers, failing to acknowledge the problem exists.
122. SGS provides no testing protocol for addressing the persistent mold growth found under 100% of public restroom hand dryers, failing to acknowledge the problem exists.
123. Plaintiff documented visible mold colonization in 100% of approximately 200 tested installations. No defendant mentions the problem, much less providing any standard for preventing, measuring, or remediating it.
124. Energy and Environmental Claims

125. Anna Lasso claims in the TrueNorth LCA, "The comparative results indicate that the Excel dryers have between 80% to 97% fewer impacts than the paper towel baseline" and "The cradle-to-grave global warming potential of dryers can be 83% less than the cradle-to-grave global warming potential of paper towel baseline."
126. UL Solutions provides in its PCR the methodology for calculating environmental impacts, stating the purpose is to "support comparable, informed, and objective sustainable purchasing of hand dryers."
127. NSF Protocol P335 makes no direct environmental or energy claims. NSF P335 Section 2 incorporates "Dyson Test Method DTM 553, Evaluation of Hand Dryer Drying Times" as a normative reference. Those false certified values form the basis for all subsequent life cycle assessments.
128. SGS makes no energy claims but it is upon their false test results that all subsequent life cycle assessments are based.
129. The energy savings and environmental claims made by hand dryer manufacturers are a primary reason they are purchased and the most heavily marketed aspect of their performance. Energy savings are based on false dry times certified by the Defendants.

K. The Empirical Proofs

130. Plaintiff's testing and analysis are fully documented, transparent, and open to independent verification. All underlying data, images, sampling records, and chain-of-custody materials have been preserved at multiple locations and will be made publicly available in their entirety at the time of filing. Plaintiff's conclusions are not asserted as matters of authority, but as matters of record: they are testable, falsifiable, and reproducible by any qualified party using the same methods and materials.
131. Plaintiff's research methodology, data, and analysis are published in ten studies with Digital Object Identifiers on Zenodo and at the Harvard Dataverse. All

raw data, 1.3TB, is hosted at Cloudflare and Backblaze. The studies are publicly available, peer-accessible, and independently verifiable on 12 websites. All of this material is preserved on 50 hard drives distributed to 50 trusted individuals.

132. The standards at issue were not imposed on Defendants by regulators. Defendants created them. Defendants promoted them. Defendants certified products under them. Defendants' own data proves compliance is impossible.

133. Drying Time Performance Testing Results

134. Performance curves from three manufacturers across 451 drying time trials demonstrated convergent correlation coefficients exceeding $r = 0.99$ across all pairwise comparisons ($p < 0.001$). In 31 trials conducted at manufacturers' exact claimed dry times—8 seconds for XLERATOR, 10-12 seconds for Dyson Airblade, 12 seconds for World Dryer—zero trials achieved any certification threshold. The most favorable result from all trials was 1.67 grams. Defendants certified 0.1 to 0.25 grams. Plaintiff documented 1.67 grams at best, 2.5 to 3.0 grams typically—1000% to 2500% over specification.

135. In real-world use, giving all the parties involved full benefit of the doubt with a 15 second drying time, hands remain visibly wet in 100% of observed trials. Water can be seen visibly dispersing from the hands onto the walls, floors, and the user with every drying cycle. No instrumentation or special skill is required to see it. Any person can verify this for themselves.

136. NSF P335 Section 6.3 establishes clear, quantified requirements: residual moisture of 0.1 grams or less at manufacturer-specified times, with 95% compliance across 20 trials.

137. Plaintiff conducted 460 trials—more than twenty times the sample size required for NSF certification. Zero trials achieved 0.1 grams or less at manufacturer-specified times. The average residual moisture was 2.77 grams—nearly 28 times the allowed threshold. The NSF standard requires 95% compliance.

Actual compliance was zero percent. The deviation is not marginal. It is 2,770 percent.

138. The probability that products achieving zero percent compliance in 460 trials would achieve 95% compliance in a 20-trial certification test approaches zero ($p < .001$, $r = .99$). This is not sampling variation, it is systematic failure. Defendants established these thresholds as the boundary between acceptable and unacceptable. Certified products exceed that boundary by 2,770 percent.

139. The Physical Impossibility of Certified Drying Times

140. The claimed drying times are not merely difficult to achieve. They are physically impossible to achieve.

141. Plaintiff's data demonstrates that water removal follows a bi-modal decay pattern. The first phase removes loose surface water quickly. The second phase removes bound water slowly. All dryers—regardless of manufacturer, technology, air velocity, or price—converge on 80 to 90 seconds of drying time to approach the 0.1 gram NSF drying threshold, with each brand and model having a slightly different profile but with all drying curves fitting together in a consistent pattern. R-squared across all trials of 0.9998—near-perfect fit.

142. Plaintiff later discovered that Excel's own researchers had identified bi-modal drying. In an undated preprint filed as Exhibit H in Case 3:12-cv-30211-MAP on February 22, 2013, "An Ultrafast, Comfortable Hand Dryer," Excel's consultants Sol Aisenberg and G. Freedman documented the same bi-modal physics Plaintiff independently discovered. They wrote: "Two sequential phases of drying are used. Phase 1 is the blowing off of loose water droplets, accounting for about 75 percent of total water removal in the first 3 seconds, and Phase 2, the evaporation phase." Their Figure 4 shows residual moisture of 1.25 grams at 4 seconds, declining to 0.2 grams at 13.5 seconds—still using Excel's self-invented 0.2 gram threshold, not NSF's 0.1 gram standard. Excel now markets 8 seconds to UL's 0.25g. Plaintiff found 80-90 seconds to approach 0.1g at $p < .001$.

143. Independent research tested this bi-modal framework across three manufacturers: Dyson, Excel (XLERATOR), and World Dryer. All three demonstrated effectively identical performance curves. Cross-manufacturer correlations exceeded $r = 0.999$ ($p < 0.001$). These are not similar curves. They are functionally identical curves produced by three different companies using three different engineering approaches.
144. On December 4, 2025, prior to testing a third manufacturer for the first time, Plaintiff documented a formal prediction: World Dryer products would fail identically to Dyson and Excel because this is a physics issue, not an engineering problem. On December 5, 2025, Independent research tested World Dryer VerdeDri units at three locations. The prediction was confirmed. World Dryer achieved first compliance with its claimed standard of 0.25 gram UL threshold at 40 seconds—233% longer than the manufacturer's 12-second claim.
145. The joint probability of three independent manufacturers producing correlation coefficients all exceeding $r = 0.99$ under the null hypothesis (that performance varies by manufacturer) is less than one in one billion.
146. Contamination Results: Microbe Load in Output Dryer Air
147. Plaintiff's Microbial Contamination Study (Study 1, $n=87$) and Ambient Air Comparison Study (Study 9, $n=49$) documented bacterial amplification across all tested units. The methodology was consistent: measure ambient air at a realistic drying time, then measure dryer output air at a realistic drying time, then calculate amplification factor.
148. One hundred thirty-six consecutive tests showed amplification, validating the hypothesis generated before the first sample was ever taken. No dryers reduced bacterial load. The probability of this occurring by chance is approximately 10 to the negative 41st power.
149. Products certified as "hygienic" amplify bacterial contamination by 50 to 110 times compared to ambient room air, literally the opposite of hygienic. Defendants

certified an industry built on hand washing science, providing the conceptual base for the products to sell. They cannot now escape it.

150. The test remains simple: remove the dryer from the room. Is it more or less sanitary?
151. Water Spray, the Absent Standard
152. Plaintiff has created a novel but accurate distinction that brings clarity to the current state of the hand dryer market. There are Dispersal-type dryers and Capture-type dryers.
153. Capture dryers collect water in receptacles for disposal. Very few remain in use, although they were common in the past.
154. Dispersal dryers have no mechanism for processing the water after the output dryer air jets hit it. They spray it everywhere in a truly bizarre design parameter that everyone sees and nobody seems to think about. Does spraying water all over a restroom make any sense at any level of thinking?
155. NSF P335 Section 6.5 imposes detailed, strict disinfection requirements on capture dryers—and zero requirements on dispersal dryers.
156. The UL PCR and the NSF P335, along with all other known certifications, have no standards for the water coming off of hands, the necessary last phase of the product operational system cycle. It is never mentioned anywhere.
157. Dispersal dryers operate at air velocities of 400 to 690 kilometers per hour—hurricane force. At these speeds, water is mechanically stripped from hands and thrown into the room with very little evaporation occurring as part of the removal process. The physics is not subtle. It is violent.
158. Plaintiff's baseline water study documented 7.30 grams of water on hands after washing. Approximately 90% of this water is removed by mechanical shear during the first phase of drying, not by evaporation. That water must go somewhere.

159. Plaintiff's Visual Dispersal Study documented where the water goes. High-speed video captured water destinations including: Adjacent walls and floor surfaces. User clothing: torso, forearms, thighs, shoes. User face and hair from upward dispersion. Airborne mist remaining visible for three or more seconds after drying. Concentrated accumulation patterns on all surrounding surfaces.
160. Paper towels showed a single destination with occasional large drops falling off as the towels are grasped: absorption into the towel material, followed by disposal. Minimal environmental dispersal.
161. Remove the dryers from the room and replace them with white paper towels. What is the impact on the restroom and the users?
162. The dispersed water cannot be sterile. Plaintiff's microbial studies documented 50-110× bacterial amplification in dryer output air. The contamination measured on petri dishes arrived via the air stream. The air stream contains water droplets. Those droplets originated from users' hands.
163. Further, the contamination problem compounds with user behavior. CDC and WHO guidelines require soap and twenty seconds of washing for effective hand hygiene. Compliance studies estimate proper handwashing rates at 5-30% in public restrooms. The dryer does not verify compliance. The dryer disperses whatever is on the user's hands—properly washed or not—throughout the room.
164. Consider three users: Compliant user (soap, 20 seconds, proper technique): Disperses water contaminated by dryer amplification of 50-110×. Average user (quick rinse, minimal soap): Disperses significantly more contaminated water from inadequately washed hands plus dryer amplification. Non-compliant user (10 second wet, no soap): Disperses fecal bacteria, pathogens, and whatever was touched directly into the room—amplified by the dryer—for the next person to encounter.
165. Every user's output becomes every other user's input.

166. The least hygienic user contaminates the air for everyone who follows. Certifiers and manufacturers provide no guidance or design standards for containment or elimination. It is never mentioned in any of the Defendants' documents. The dryer broadcasts the consequences of improper washing to everyone in the space.
167. Poor washing plus a paper towel equals contamination contained in the towel and disposed in trash. Poor washing plus dispersal dryer equals contamination broadcast to surfaces and people in the space.
168. At 150 million daily dispersal-type dryer uses in the United States, water dispersal occurs at population scale: Daily: 2.8 to 4.6 million cups of water sprayed onto users, walls, floors, and fixtures. Annually: 1 to 1.7 billion cups of water dispersed into public restroom environments. Per dryer: Approximately 3 cups of water dispersed daily.
169. That is not incidental moisture. It is systematic environmental contamination at industrial scale.
170. Neither NSF P335 nor the UL PCR contains any standard, test, measurement, or specification for water dispersal. The primary output of the device—where the water goes—is completely unaddressed.
171. Defendants certified drying time. Defendants certified energy consumption. Defendants certified HEPA filtration of intake air. Defendants ignore water that sprays onto walls, floors, clothing, faces, and into the lungs of everyone in the room. The most consequential sanitation related output of the device is invisible to the certification standards.
172. Remove the dryers from the room. Is it more or less hygienic?
173. Physical Environmental Mold Contamination: The Plume of Filth
174. Plaintiff's Wandering Plume of Filth Study documented visible contamination patterns beneath hand drying equipment. Plaintiff randomly entered 127 public

restrooms and visually examined the areas under the dryers and towel dispensers using NIOSH and FDA standard mold assessment protocols.

175. Statistical comparison: $\chi^2 = 72.0$, $p < 0.001$; Ratio: Dispersal dryers show 8× higher mold rates than white paper towel installations (100% vs. 13%).
176. Every dispersal-type hand dryer installation exhibited visible wall mold. One hundred percent. The contamination pattern radiates outward from the device, originating narrow at the unit and fanning toward the floor like a plume—which is exactly what it is.
177. Independent laboratory analysis by Hayes Microbial Consulting (EPA Laboratory ID: VA01419) confirmed fungal presence in wall contamination samples. Species identified include *Aspergillus*/*Penicillium*, *Alternaria*, *Cladosporium*, and *Chaetomium*—organisms documented by CDC and the Institute of Medicine as respiratory hazards and allergens.
178. The plume is a persistent physical presentation that correlates perfectly with the microbial and fungal findings in the dryer output air. The fact that mold is found at 100% of dryer installations is causal for dryers when in public use, making laboratory claims meaningless. The visible contamination is evidence of the invisible contamination.
179. Critical finding: The contamination affects everyone who enters the restroom, not just dryer users. A person who uses paper towels if they are provided, a person who uses the sink but not the dryer, a person who simply walks through—all are exposed to amplified microbial loads and environmental contamination created by dryers.
180. The Paper Towel Alternative
181. Plaintiff's paper towel contamination studies produced a novel finding: prior paper towel research never sorted by towel type.

182. White paper towels are statistically equivalent to ambient room air in microbial content. In Study 4 (n=29), 55.6% of white towels were completely sterile. The remainder contained 1-2 CFU. Mean contamination: 0.56 CFU. Wilcoxon signed-rank test against ambient air: $p = 0.23$ —no significant difference.
183. Brown paper towels are contaminated from the factory. 100% of samples contained microbial colonies, ranging from 6-186 CFU across both studies. The contamination is intrinsic to the product.
184. The distributions do not overlap. The 75th percentile of white towels (1 CFU) falls below the 25th percentile of brown towels (11 CFU). This complete distributional separation is exceptionally rare in biological data. Cohen's $h = 1.671$. $p < 0.003$.
185. Study 9 conducted dual-intervention tests: dryer and paper towels tested in the same restroom on the same day under identical ambient conditions. Hand dryers produced 138-407× more contamination than white paper towels. The difference is the device, not the environment.
186. Paper towels dry hands in 20-30 seconds to 0.1g residual moisture—faster than dryers at actual performance. Water is absorbed into the towel and disposed in trash. No dispersal. No aerosol. No plume.
187. Plaintiff's Wandering Plume study documented the environmental consequence. White paper towel dispensers showed 13% mold rates (5/39 installations). Brown paper towel dispensers showed 40% (12/30). Dispersal-type hand dryers showed 100% (50/50). The 8-fold difference between white paper towels and dispersal dryers is definitive.
188. Remove the dryer. Install a white paper towel dispenser. Every problem documented in this complaint disappears. The infrastructure exists. The cost is equivalent. The dispenser fits the space. The hypothetical answers itself.
189. The Green Energy Catastrophe

190. False drying time claims corrupt every environmental calculation built upon them. Energy consumption is power multiplied by time. When manufacturers claim 8 seconds but products require 70-90 seconds, energy consumption increases tenfold. The entire environmental marketing narrative collapses.
191. Manufacturers claim hand dryers use 3 Wh per dry and produce 85-90% less CO₂ than paper towels. These claims assume 8-12 second drying times. At actual drying times of 70-90 seconds, energy consumption rises to 25-28 Wh per dry—7.5 to 8.75 times higher than claimed.
192. Using Defendants' own commissioned lifecycle data, the claimed 85-90% environmental advantage disappears entirely. At actual drying times, hand dryers produce CO₂ emissions equivalent to paper towels. When independent academic studies are included, hand dryers produce 2-3 times more CO₂ than paper towels.
193. False times create false energy and CO₂ emissions values, leading to false marketing claims made by manufacturers with explicit attribution to certification by Defendants.
194. The false data propagates into building certification. Excel's LEED v4.1 guidance instructs building professionals to "input 3.68 Wh per 8 second cycle use... for energy modelling purposes." Thousands of LEED-certified buildings contain false energy data in their certification calculations.
195. Products marketed as environmentally superior consume 7-10 times more energy than claimed and provide no CO₂ advantage over paper towels.
196. Three independent AI systems (Claude, ChatGPT, Grok) verified these calculations using manufacturer-published lifecycle assessment data, working from primary sources without access to each other's outputs. All three converged on the same conclusion.
197. The Causal Chain

198. The false drying time claim is the root cause of environmental contamination and energy/environmental failure. Each step follows inevitably from the one before:
199. Manufacturers claim 8 to 14 second drying times. Actual drying requires 80 to 90 seconds. The claim is false by 500 to 1,000 percent.
200. If a use stops drying at claimed times, 2.5 to 3.5 grams of water remain on hands. That water has been infested with the microorganisms in the dryer output air stream.
201. Carrying that water after dryer use increases microorganism transfer by 1000×.
202. If a user dries until hands are dry—80-90 seconds—microorganism amplifications on the hands increase over room air by 50-110×.
203. Energy and CO₂ production become equal to or greater than that of paper towels.
204. At 400 to 690 km/h air velocity in a Dispersal-type dryer water is violently blown onto walls, floors, users, and into the air as aerosol.
205. Dispersed water carries microorganisms from users' hands and the output air jets, contaminating the room for the users who come after.
206. Continuous deposition grows visible mold in 100% of installations, volume controlled by the cleaning practices of the restroom owners.
207. The restroom becomes a permanent contamination zone. Everyone who enters is exposed, regardless of whether they use the dryer.
208. The user faces several impossible choices with every restroom use: don't enter to avoid dryer contamination, wash and don't dry, dry for specified time and leave wet or dry for the actual time-to-dry and carry increased microbial exposure and use more energy.

209. The hypothetical answers itself. Remove the dryer and every step in this chain disappears. The water stays on hands or is absorbed by a towel. The mold doesn't grow. The contamination zone doesn't form. The impossible choices don't exist. The dryer is not incidental to the harm. The dryer is the harm.
210. The Users' Dilemma
211. Users of certified hand dryers face two options, both creating harm.
212. Option one: Use the dryer for the specified 8 to 14 seconds. Leave with wet hands, freshly sprayed with bacteria and fungus. Transfer bacteria to every surface touched thereafter—doorknobs, phones, keyboards, other people, food.
213. Option two: Use the dryer for 70 to 90 seconds to actually achieve dry hands. During this extended exposure, breathe air contaminated by liquid aerosols with 50 to 110 times room air microorganism load and be sprayed with liquid water carrying the same.
214. A user cannot achieve dry hands without extended exposure to contaminated output or pull out prematurely and leave with wet hands transmitting organisms at a rate 500 times higher than dry hands. A user cannot limit exposure without leaving with wet hands. The product design creates an inescapable dilemma.
215. Once the problem is understood, the user faces a third harm: the knowledge that entering a restroom with a hand dryer means accepting one of the two options above, or not entering at all.
216. Following the rules makes you sick. Every option the certification system provides leads to the same place: elevated contamination exposure. The user who trusts the certification and uses the dryer for the claimed time is worse off than the user who ignores it.

L. How These Certifications Came to Exist

217. In April 2007, NSF International established NSF P335, titled "Hygienic Commercial Hand Dryers." Section 3.4 defined dry hands as "less than 0.1 g residual moisture." Section 6.3 required 95% compliance across 20 trials. This was the original standard, created by the original certifier, with a threshold of 0.1 grams.
218. In 2012, Excel Dryer proposed amending NSF P335 to change the dryness threshold from 0.1 grams to 0.2 grams. NSF rejected this proposal. Dyson's attorneys stated in federal court filings: "Excel proposed an amendment to NSF Protocol P335 to amend the definition of 'dry hands' from 0.1 grams to 0.2 grams."
219. Excel used the rejected standard anyway, advertising compliance under a "modified NSF protocol." SGS testing commissioned by Excel in 2012 applied "a revised version of NSF Protocol P335 Hygienic Commercial Hand Dryers currently being developed and reviewed by NSF and its new technical panel for the 5 year protocol update." The proposal was rejected. Excel cited it anyway.
220. In July 2016, UL Solutions published the Product Category Rules for Hand Dryers with a 0.25 gram threshold—weaker than the proposal NSF had rejected four years earlier. The committee that created this standard was 80% manufacturer representatives. Excel held 40% of manufacturer seats. William Gagnon chaired it.
221. On July 25, 2017, UL Environment issued Environmental Product Declaration No. 4787137936.102.1 for Excel Dryer's XLERATOR hand dryer. The certificate stated: Drying time: 8 seconds. Energy consumption: 3.68 Wh per use. Residual moisture threshold: 0.25 grams. Wade Stout, UL Environment EPD Project Manager, signed as external verifier. Thomas P. Gloria of Industrial Ecology Consultants verified the lifecycle assessment. The certificate had a five-year validity period.
222. The UL certificate expired in July 2022. Excel did not renew with UL. UL continues to certify hand dryers for other manufacturers.

223. Virginia State Corporation Commission records show the following timeline:
April 26, 2022: Articles of organization filed for "EPD USA LLC" with Anna Lasso as registered agent. July 6, 2022: Articles of amendment filed changing company name to "Smart EPD LLC." July 2022: UL EPD No. 4787137936.102.1 expires.
224. At the time of the April 2022 LLC formation, Anna Lasso was either employed by UL Environment as Product Manager of EPDs and PCR Project Manager, or had recently terminated employment there.
225. The timing is significant. Anna Lasso formed EPD USA LLC in April 2022 while UL continued to certify hand dryers for other manufacturers. Hokwang's UL EPD was issued April 1, 2022—the same month Anna Lasso incorporated her company. When Excel's UL EPD expired three months later, Excel chose SmartEPD certification rather than UL renewal.
226. On June 23, 2023, Smart EPD issued Environmental Product Declaration No. SmartEPD-2023-002-0006-01 for Excel Dryer's XLERATOR hand dryer. The certificate stated: Drying time: 8 seconds. Energy consumption: 3.68 Wh per use. Residual moisture threshold: 0.25 grams. These specifications are identical to the expired UL certificate.
227. Thomas P. Gloria of Industrial Ecology Consultants verified the lifecycle assessment for the 2023 SmartEPD certificate. Thomas P. Gloria had verified the lifecycle assessment for the 2017 UL certificate. The same LCA verifier signed both documents.
228. The trajectory is documented. NSF established 0.1 grams in 2007. Excel proposed 0.2 grams. NSF rejected it. UL created 0.25 grams in 2016. Anna Lasso certified Excel to that standard. All these thresholds—0.1, 0.2, and 0.25 grams—are proven false by Plaintiff's data showing 2.5 to 3.0 grams at claimed times.

M. The 2012 SGS Report

229. SGS Performance Test Report No. 2774929EFF-001, dated September 7, 2012, was filed as Exhibit B to Excel's motion for preliminary injunction in Case 3:12-cv-30211-MAP, Document 6-2. The report is signed by Martin Dodd, Project Engineer, and reviewed by Jody Leber. The client is Excel Dryer.
230. The report tested five hand dryer models: Excel Dryer HO-IW, World Dryer XA5-974AU, Excel Dryer XL-BW, World Dryer K972A, Dyson AB04, and Dyson A01. Samples were received between June 29 and August 13, 2012. Testing occurred August 15-24, 2012.
231. Page 4 of the report states: "Each product was tested in accordance with a revised version of NSF Protocol P335 Hygienic Commercial Hand Dryers currently being developed and reviewed by NSF and its new technical panel for the 5 year protocol update."
232. Page 9 of Annex A states: "For the purposes of NSF Protocol P335, 'thoroughly dry' means that less than 0.1 grams of residual moisture per hand for a total of 0.2 grams or less is recovered when a user dries his or her hands on a paper towel after using the hand dryer." SGS certified results using the 0.2 gram threshold Excel proposed—that NSF rejected.
233. This is linguistic sleight of hand. NSF P335 Section 3.4 defines dry hands as "less than 0.1 g residual moisture"—total, not per hand. By redefining the threshold as "0.1 grams per hand for a total of 0.2 grams," Excel doubled the acceptable moisture while preserving the appearance of NSF compliance.
234. Table 1 of the SGS report reveals the test results at 120V, 60Hz: Excel Dryer XL-BW at 12 seconds: 0.186 grams average residual moisture. Excel Dryer XL-BW at 15 seconds: 0.108 grams average residual moisture. Dyson AB04 at 12 seconds: 0.183 grams average residual moisture.

235. SGS certified these results: XLERATOR at 0.186 grams at 12 seconds. Plaintiff's 460 trials, following stated methodology, document 2.5 to 3.0 grams at the same intervals—1,350 to 1,600 percent higher than SGS findings.

236. Excel's current marketing claims 8 seconds. Denis Gagnon testified under oath to 12 seconds. The SGS report tested at 12 and 15 seconds. The 8-second claim, while attributed to current models, has no foundation in any testing document anywhere in the evidentiary record.

N. ISO 14025 Independence Violation

237. ISO 14025:2006, Section 8.1.3 requires that EPD verification be performed by an independent verifier "independent of the organization, the EPD, and any parties that have a commercial interest in the product." Section 8.1.4 specifies that the program operator "shall not act as verifier for EPDs it registers."

238. The SmartEPD certificate for XLERATOR Hand Dryer, Certificate No. SmartEPD-2023-002-0006-01, lists Anna Lasso in three capacities on Page 2: as contact for Smart EPD, the EPD Program Operator; as "Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071"; and as "Independent external verification of EPD, according to ISO 14025 and reference PCR."

239. Smart EPD LLC was incorporated in Virginia in April 2022. Four months later, Smart EPD issued its first major certification: the Excel XLERATOR EPD. Excel was not a new client relationship. Anna Lasso had worked "closely" with William Gagnon for seven years while he chaired the UL PCR committee.

240. The TrueNorth Collective LCA underlying the SmartEPD certificate was also reviewed by Anna Lasso as panel chair. The Critical Review Statement in Appendix I, dated June 19, 2023, bears her signature as "Chair of the External Independent Third-Party Review Panel." She chaired the LCA review panel and verified the EPD based on that LCA.

241. ISO 14025 requires three layers of independence: Program Operator, LCA Reviewer, External Verifier. One person occupies all three roles. That is not compliance with ISO 14025. That is the opposite of compliance.

O. The Excel v Dyson Litigation

242. In December 2012, Excel Dryer sued Dyson in the United States District Court for the District of Massachusetts, Case 3:12-cv-30211-MAP, documenting, under oath, previously proprietary or trade secret information displaying an entire trail of conflicting claims about drying time, testing protocols, marketing representations, and expert data.

243. The litigation produced sworn testimony and documentary evidence of both companies and the certifying agencies arguing about standards and test results that powerfully foreshadow the claims made in this complaint. Each manufacturer publicly accused the other of fraud. Both were right. They appear to have seen the data in 2012 and settled to hide it.

244. Excel represented to the court that its SGS testing used "a revised version of NSF Protocol P335 Hygienic Commercial Hand Dryers currently being developed and reviewed by NSF." Dyson's attorneys responded: "The phrase 'revised NSF Protocol P335' unambiguously communicates that at some point, NSF revised its protocol P335 and that Excel's test was based on this revised protocol. That is absolutely untrue."

245. Dyson revealed that Excel had proposed amending NSF P335 to change the dryness threshold from 0.1 grams to 0.2 grams. NSF rejected this proposal. Excel used the rejected standard anyway and represented to the federal court that it was "the revised NSF Protocol P335" without disclosing that NSF had rejected it.

246. Dyson's memorandum stated explicitly: "The Xlerator is not NSF Certified, meaning NSF has not independently verified that it passes NSF P335 and dries

hands within 15 seconds." This remains true today. Excel has never achieved NSF P335 certification.

247. On February 22, 2013, Dyson filed its Answer, Statement of Defenses, and Counterclaims. In sworn counterclaims, Dyson alleged: "The claim that the Xlerator dries hands completely in 10-15 seconds is literally false. According to testing performed by Dyson in its laboratory facilities in the United Kingdom, the Xlerator requires 20 seconds or longer to dry hands to a level that meets NSF Protocol P335."

248. Both companies' sworn claims are now proven false. Plaintiff's 460 residual moisture trials demonstrate that neither product achieves threshold dryness until 70-90 seconds. Dyson was right about Excel. Excel was right about Dyson. Both are responsible for making false claims about themselves.

249. The case settled before discovery. Neither company wanted its testing methodology examined under oath. Neither company wanted to explain how products claiming 8-12 second drying times were tested at 12-20 seconds. Neither company wanted to reconcile marketing claims with physical impossibility. The settlement silenced the dispute but preserved the underlying false claims.

P. The Document That Proves It

250. Certificate SmartEPD-2023-002-0006-01, issued June 23, 2023, certifies the XLERATOR Hand Dryer, 120V. The certificate expires June 23, 2028. The EPD Holder is Excel Dryer, 357 Chestnut St, East Longmeadow, MA. Page 2 of the certificate lists the verification parties. Three entries appear:

251. EPD Program Operator: Smart EPD, with Anna Lasso as contact at anna.lasso@smartepd.com. Independent critical review of the LCA and data, according to ISO 14044 and ISO 14071: Anna Lasso, Smart EPD. Independent external verification of EPD, according to ISO 14025 and reference PCR: Anna Lasso, Smart EPD.

252. ISO 14025 requires independence between the program operator, the LCA reviewer, and the external verifier. These are meant to be separate parties providing independent oversight. On this certificate, one person occupies all three roles. Anna Lasso operates the program, reviews the underlying data, and verifies the final product.
253. Page 3 of the certificate states: "The XLERATOR dries hands completely in 8 seconds." Page 4 lists product specifications including: "Dry time: 8 seconds."
254. Page 13, under Additional Environmental Information, states: "Dry Time and Energy Use: Tests were performed by SGS International on standard XLERATOR Hand Dryer with 0.8 inch nozzle to 0.25g or less of residual moisture, pursuant to the UL Environment Global Product Category Rules (PCR) for Hand Dryers."
255. This certificate is not limited to environmental claims. It embeds the 8-second drying time as a product specification and uses that specification as the basis for all energy and lifecycle calculations. The functional unit is 100,000 instances of hand drying. Energy consumption is calculated as 3.68 Wh per use—a figure derived from 8 seconds at 1,650 watts.
256. The certificate explicitly documents testing to 0.25 grams—the UL PCR threshold that is 2.5 times weaker than NSF P335. The certificate does not claim NSF compliance. It does not claim UL certification. It claims testing to the UL PCR standard, verified by the person who helped create that standard.
257. The TrueNorth Collective Life Cycle Assessment underlying this certificate states on page 1: "Dry time, power and energy consumption are based on the average test results provided by Excel." No independent verification. Manufacturer-provided data, certified by the manufacturer's former colleague.
258. The same TrueNorth LCA states: "Although hygiene is another purpose for hand dryers that is of interest to the scientific community (Materials Systems Laboratory, 2011), hygiene is not considered in this study." A Life Cycle Assessment for products marketed as "hygienic" explicitly excludes hygiene from consideration.

259. Excel Dryer's current marketing claims XLERATOR dries hands in 8 seconds. This claim appears on Excel's website, on Smart EPD certificates, and in LEED credit documentation. No test data in the evidentiary record supports this claim.
260. The 2012 SGS report tested at 12 seconds and 15 seconds. No 8-second data exists. Denis Gagnon testified under oath in 2012 that 12 seconds was accurate.
261. Plaintiff's 500+ independent trials show actual drying time to 0.1 grams is 70-90 seconds across all manufacturers. No Excel unit achieved below 0.15 grams at any tested interval.
262. The claim has propagated through the certification ecosystem without ever being validated. Excel claims 8 seconds. Smart EPD certifies a document stating 8 seconds. LEED credits reference documentation claiming 8 seconds. Building Green databases list 8 seconds. At no point in this chain has anyone independently verified that 8 seconds is achievable.
263. The actual, historical performance of all production hand dryers has never not been 70-90 seconds to 0.1g of residual water. Claims otherwise must be publicly validated. If they cannot be validated, the certifications must be publicly revoked.
264. Defendants can replicate their certified results for the Court in minutes. Or not.

Q. Plaintiff's Harm

265. Plaintiff installed over 120 XLERATOR hand dryers at Northwestern Memorial Hospital's main campus based on Defendants' false representations and certifications. The devices do not perform as represented.
266. Plaintiff suffered direct economic harm including the purchase price of the dryers, installation costs, excess energy costs from dryers operating 7-10 times longer than claimed, and remediation costs to address mold contamination.

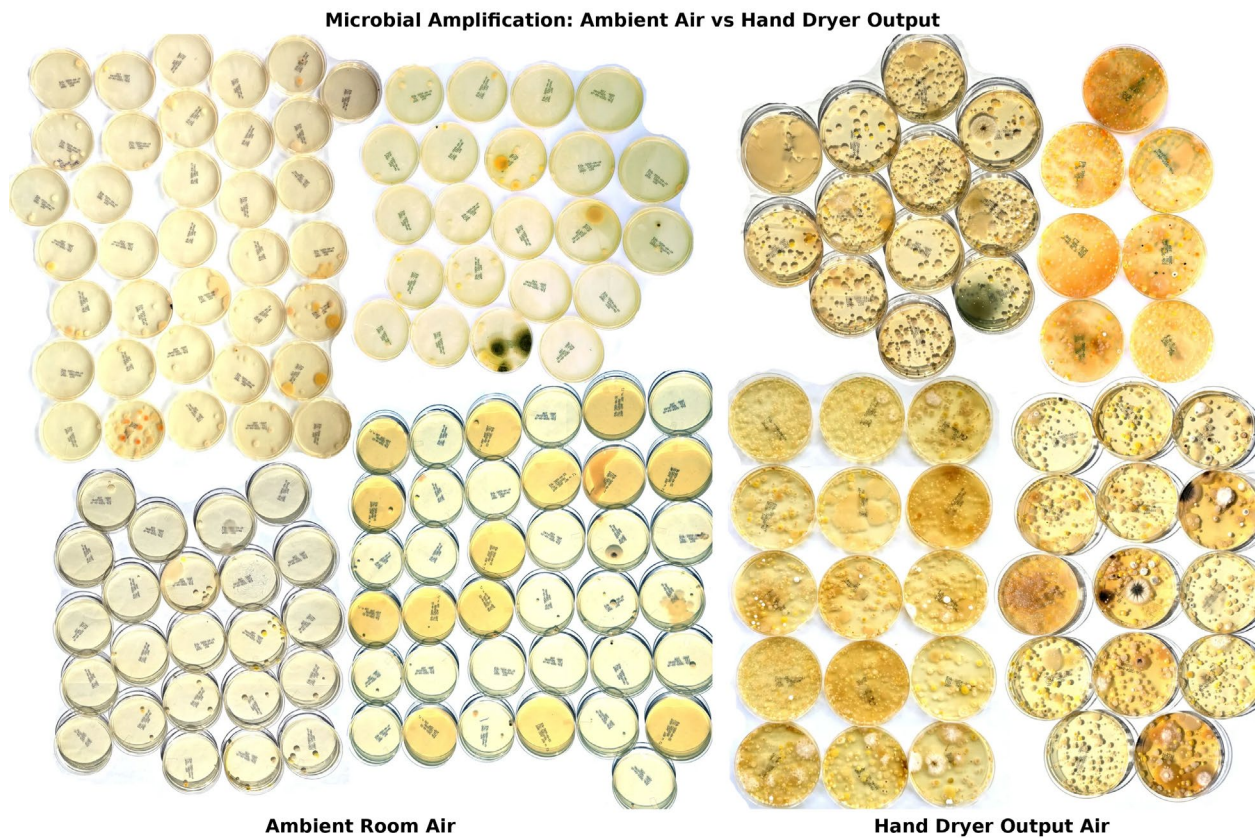
267. Plaintiff suffered reputational harm. Excel featured Plaintiff in a marketing case study without Plaintiff's consent after learning the products amplify contamination. Plaintiff's institutional credibility was used to market defective products to other healthcare facilities.
268. Plaintiff's patients, visitors, and staff have been exposed to bacterial and fungal contamination at levels 50-110 times higher than ambient air. For immunocompromised patients—cancer patients, organ transplant recipients, post-surgical patients—this exposure poses particular risk.
269. Plaintiff planned additional installations at its Lake Forest campus and its Northwestern Organ Transplant Clinic in Joliet, Illinois. Those plans were based on Defendants' false representations. Plaintiff has incurred costs in planning installations that cannot proceed.
270. Plaintiff's Infection Control Board relied on Defendants' certifications when making equipment decisions affecting patient safety. That reliance was induced by Defendants' false representations.

R. Timeliness

271. Plaintiff's claims are timely. The independent scientific research establishing Defendants' misrepresentations was published between September 2023 and December 2025. Plaintiff could not have discovered the falsity of Defendants' representations before this research was available.
272. Defendants' false certifications remain active. SmartEPD Certificate No. SmartEPD-2023-002-0006-01 is valid through June 23, 2028. Defendants continue to issue and maintain false certifications. Plaintiff's injuries continue to accrue.
273. Defendants' misconduct constitutes a continuing course of wrongful action. Each day that Defendants maintain false certifications, each day that Excel markets false drying time claims, each day that Plaintiff's patients are exposed to contamination—constitutes a new injury.

S. The Hypothetical

All aspects of hand dryer performance can be understood if you remove it from the room. Does a dryer improve or degrade the room by being there?



V. COUNTS

COUNT I — NEGLIGENCE (Against Excel Dryer)

274. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

275. Excel owed Plaintiff a duty of reasonable care in the design, manufacture, marketing, and sale of its XLERATOR hand dryers.

276. Excel breached this duty by designing, manufacturing, marketing, and selling hand dryers that amplify bacterial and fungal contamination, fail to dry hands at claimed times, disperse contaminated water throughout the restroom environment, and cause mold colonization on adjacent surfaces.

277. Excel's breach was the direct and proximate cause of Plaintiff's damages.

278. As a direct and proximate result of Excel's negligence, Plaintiff has suffered damages including but not limited to purchase costs, installation costs, excess energy costs, remediation costs, reputational harm, and exposure of patients, visitors, and staff to contamination.

COUNT II — PRODUCTS LIABILITY: DESIGN DEFECT (Against Excel Dryer)

279. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

280. Excel designed, manufactured, and sold XLERATOR hand dryers.

281. The XLERATOR hand dryer is defectively designed. The defect is the design itself. No manufacturing variance or user error is required for the product to amplify contamination, fail to dry hands, disperse contaminated water, and cause mold growth. These outcomes occur in 100% of normal use.

282. The defective design renders the product unreasonably dangerous for its intended use.

283. The XLERATOR hand dryer was defective when it left Excel's control and was used in a reasonably foreseeable manner.

284. The design defect was the direct and proximate cause of Plaintiff's damages.

COUNT III — PRODUCTS LIABILITY: FAILURE TO WARN (Against Excel Dryer)

285. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

286. Excel knew or should have known that XLERATOR hand dryers amplify bacterial and fungal contamination, fail to dry hands at claimed times, disperse contaminated water, and cause mold colonization.
287. Excel failed to provide adequate warnings regarding these hazards.
288. Adequate warnings would have prevented Plaintiff from purchasing and installing the products.
289. Excel's failure to warn was the direct and proximate cause of Plaintiff's damages.

COUNT IV — BREACH OF EXPRESS WARRANTY (Against Excel Dryer)

290. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
291. Excel expressly warranted that XLERATOR hand dryers dry hands in 8 seconds, provide hygienic hand drying, use 80% less energy than conventional dryers, and provide 95% cost savings compared to paper towels.
292. These warranties were part of the basis of the bargain between Excel and Plaintiff.
293. The XLERATOR hand dryers do not conform to these express warranties. The products do not dry hands in 8 seconds. The products do not provide hygienic hand drying. The energy and cost savings claims are predicated on the false 8-second drying time.
294. Plaintiff provided Excel with reasonable notice of the breach.
295. Excel's breach of express warranty was the direct and proximate cause of Plaintiff's damages.

COUNT V — BREACH OF IMPLIED WARRANTY OF MERCHANTABILITY (Against Excel Dryer)

296. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
297. Excel is a merchant with respect to hand dryers.
298. Excel impliedly warranted that XLERATOR hand dryers were merchantable and fit for the ordinary purposes for which such goods are used.
299. The ordinary purpose of a hand dryer is to dry hands hygienically. XLERATOR hand dryers do not accomplish this purpose. They leave hands wet at claimed times and amplify contamination at all times.
300. The XLERATOR hand dryers were not merchantable when sold.
301. Excel's breach of the implied warranty of merchantability was the direct and proximate cause of Plaintiff's damages.

COUNT VI — BREACH OF IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE (Against Excel Dryer)

302. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
303. At the time of purchase, Excel knew or had reason to know that Plaintiff required hand dryers for use in a healthcare facility serving immunocompromised patients.
304. Excel knew or had reason to know that Plaintiff was relying on Excel's skill and judgment to furnish suitable goods for this particular purpose.
305. Plaintiff did in fact rely on Excel's skill and judgment.
306. The XLERATOR hand dryers are not fit for use in a healthcare facility serving immunocompromised patients. Products that amplify bacterial and fungal

contamination by 50-110 times are unsuitable for any healthcare environment, and particularly unsuitable for environments serving patients with compromised immune systems.

307. Excel's breach of the implied warranty of fitness for a particular purpose was the direct and proximate cause of Plaintiff's damages.

COUNT VII — NEGLIGENT MISREPRESENTATION (Against Excel Dryer)

308. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

309. Excel made false representations of material fact to Plaintiff regarding the drying time, hygiene, energy efficiency, and cost savings of XLERATOR hand dryers.

310. Excel made these representations in the course of its business and in transactions in which it had a pecuniary interest.

311. Excel failed to exercise reasonable care in obtaining and communicating information regarding the performance of its products.

312. Plaintiff justifiably relied on Excel's representations in purchasing and installing XLERATOR hand dryers.

313. Excel's negligent misrepresentations were the direct and proximate cause of Plaintiff's damages.

COUNT VIII — VIOLATION OF ILLINOIS CONSUMER FRAUD AND DECEPTIVE BUSINESS PRACTICES ACT (Against All Defendants)

314. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

315. The Illinois Consumer Fraud and Deceptive Business Practices Act, 815 ILCS 505/1 et seq., prohibits unfair or deceptive acts or practices in the conduct of trade or commerce.

316. Defendants engaged in unfair and deceptive practices by making false representations regarding hand dryer performance, hygiene, energy efficiency, and environmental impact; by certifying products to specifications that are physically impossible to achieve; by failing to disclose material facts regarding product performance; and by creating and maintaining a certification system designed to validate false claims rather than verify actual performance.
317. Defendants' conduct occurred in the course of trade or commerce.
318. Defendants intended that Plaintiff and other consumers rely on their false representations and certifications.
319. Plaintiff suffered actual damage as a result of Defendants' violations of the ICFA.
320. Pursuant to 815 ILCS 505/10a, Plaintiff is entitled to actual damages, punitive damages, and reasonable attorney's fees and costs.

COUNT IX — UNJUST ENRICHMENT (Against All Defendants)

321. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
322. Plaintiff conferred a benefit on Defendants by purchasing XLERATOR hand dryers at prices that included certification fees and premiums attributable to Defendants' false representations and certifications.
323. Defendants appreciated and retained this benefit.
324. Under the circumstances, it would be unjust for Defendants to retain this benefit without compensating Plaintiff.
325. Defendants were unjustly enriched at Plaintiff's expense.

COUNT X — NEGLIGENT MISREPRESENTATION (Against UL Solutions)

326. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
327. UL made false representations of material fact by creating and publishing the Product Category Rules for Hand Dryers; by certifying Excel's XLERATOR hand dryer under EPD No. 4787137936.102.1 with specifications that UL's own data proved were impossible; and by allowing its certification marks to be used in marketing materials containing false performance claims.
328. UL made these representations in the course of its business and in transactions in which it had a pecuniary interest.
329. UL failed to exercise reasonable care in creating standards, conducting testing, and issuing certifications.
330. Plaintiff justifiably relied on UL's certifications in purchasing and installing XLERATOR hand dryers.
331. UL's negligent misrepresentations were the direct and proximate cause of Plaintiff's damages.

COUNT XI — NEGLIGENT MISREPRESENTATION (Against SmartEPD and Anna Lasso)

332. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.
333. SmartEPD and Anna Lasso made false representations of material fact by issuing Environmental Product Declaration No. SmartEPD-2023-002-0006-01 certifying that XLERATOR dries hands in 8 seconds; by certifying energy consumption of 3.68 Wh per use based on the false 8-second drying time; by claiming independent verification while Anna Lasso occupied all three verification

roles; and by allowing SmartEPD certifications to be used in marketing materials containing false performance claims.

334. SmartEPD and Anna Lasso made these representations in the course of their business and in transactions in which they had a pecuniary interest.

335. SmartEPD and Anna Lasso failed to exercise reasonable care in issuing certifications.

336. Plaintiff justifiably relied on SmartEPD certifications in evaluating XLERATOR hand dryers.

337. SmartEPD's and Anna Lasso's negligent misrepresentations were the direct and proximate cause of Plaintiff's damages.

COUNT XII — NEGLIGENT MISREPRESENTATION (Against SGS)

338. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

339. SGS made false representations of material fact by issuing Performance Test Report No. 2774929EFF-001 purporting to validate hand dryer performance; by testing at 12 and 15 seconds while manufacturers claimed 8 seconds; by using a "revised version of NSF Protocol P335" that NSF had rejected; and by allowing its test reports to be cited as third-party validation of claims the reports do not support.

340. SGS made these representations in the course of its business and in transactions in which it had a pecuniary interest.

341. SGS failed to exercise reasonable care in conducting testing and issuing reports.

342. Plaintiff justifiably relied on SGS testing data in evaluating XLERATOR hand dryers.

343. SGS's negligent misrepresentations were the direct and proximate cause of Plaintiff's damages.

COUNT XIII — NEGLIGENT UNDERTAKING (Against UL, SmartEPD, Anna Lasso, and SGS)

344. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

345. Defendants UL, SmartEPD, Anna Lasso, and SGS voluntarily undertook to perform certification and testing services for the benefit of commercial purchasers including Plaintiff.

346. Defendants knew or should have known that Plaintiff and other commercial purchasers would rely on their certifications and test reports in making purchasing decisions.

347. Defendants failed to exercise reasonable care in performing their undertaking.

348. Plaintiff relied on Defendants' undertaking to Plaintiff's detriment.

349. Defendants' negligent undertaking was the direct and proximate cause of Plaintiff's damages.

COUNT XIV — NEGLIGENT STANDARD CREATION (Against UL Solutions)

350. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

351. UL voluntarily undertook to create standards for hand dryer performance and environmental claims through the Product Category Rules for Hand Dryers.

352. UL knew or should have known that commercial purchasers including Plaintiff would rely on products certified under these standards.

353. UL failed to exercise reasonable care in creating standards by allowing manufacturers to dominate the standards committee (80% manufacturer representation); by setting thresholds (0.25 grams) that UL's own data proved were not achievable at claimed times; by ignoring water dispersal, contamination amplification, and mold colonization; and by creating functional unit calculations based on drying times that are physically impossible.

354. UL's negligent standard creation was the direct and proximate cause of Plaintiff's damages.

COUNT XV — EPD VERIFICATION NEGLIGENCE (Against SmartEPD and Anna Lasso)

355. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

356. SmartEPD and Anna Lasso voluntarily undertook to verify Environmental Product Declarations for hand dryers.

357. SmartEPD and Anna Lasso failed to exercise reasonable care in performing verification by certifying 8-second drying times without independent testing; by occupying all three verification roles in violation of ISO 14025; by certifying specifications identical to an expired UL certificate without updated testing; and by allowing certifications to be used to market products to healthcare facilities despite excluding hygiene from consideration.

358. SmartEPD's and Anna Lasso's negligent verification was the direct and proximate cause of Plaintiff's damages.

COUNT XVI — DECLARATORY AND INJUNCTIVE RELIEF (Against All Defendants)

359. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

360. An actual controversy exists between Plaintiff and Defendants regarding the accuracy of Defendants' certifications and representations.
361. Plaintiff seeks a declaratory judgment that: Defendants' certified drying time specifications are false; Defendants' certified energy consumption specifications are false; Defendants' hygiene claims are false; Defendants' environmental claims are false; SmartEPD Certificate No. SmartEPD-2023-002-0006-01 violates ISO 14025 independence requirements; and Defendants' certifications were negligently issued.
362. Plaintiff seeks injunctive relief requiring Defendants to: withdraw, correct, or revoke false certifications; cease marketing products with false performance claims; cease certifying products without independent verification of claimed specifications; and disclose to past purchasers that certified specifications are not achievable.
363. Plaintiff has no adequate remedy at law. Defendants' false certifications remain active and continue to cause harm. Without injunctive relief, Defendants will continue to issue false certifications that mislead commercial purchasers.

VI. DAMAGES

364. As a direct and proximate result of Defendants' conduct, Plaintiff has suffered damages including but not limited to: the purchase price of over 120 XLERATOR hand dryers; installation costs; excess energy costs from dryers operating 7-10 times longer than represented; costs to remediate mold contamination caused by dryers; costs to investigate Defendants' misrepresentations; costs to plan installations that cannot proceed; reputational harm from being featured in Excel's marketing case study; and exposure of Plaintiff's patients, visitors, and staff to bacterial and fungal contamination.

VII. JURY DEMAND

365. Plaintiff demands a trial by jury on all issues so triable.

VIII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff Northwestern Memorial HealthCare respectfully requests that this Court enter judgment against Defendants and award Plaintiff:

- 366. Compensatory damages in an amount to be proven at trial;
- 367. Punitive damages against all Defendants;
- 368. Statutory damages under the Illinois Consumer Fraud and Deceptive Business Practices Act;
- 369. Declaratory relief as specified in Count XVI;
- 370. Injunctive relief as specified in Count XVI;
- 371. Pre-judgment and post-judgment interest at the maximum legal rate;
- 372. Reasonable attorney's fees and costs of suit;
- 373. Such other and further relief as the Court deems just and proper.

Respectfully submitted,

NORTHWESTERN MEMORIAL HEALTHCARE

By: _____

Its Attorneys

Dated: _____

EXHIBITS

Journal Preprints

[EXHIBIT-A] Transmission of Bacteria and Fungus via Dyson and Xlerator Hand Dryers, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.15504115; Journal Preprint 1 of 11

[EXHIBIT-B] Testing the Validity of Hand Dryer Drying Time Specifications, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.15503698; Journal Preprint 2 of 11

[EXHIBIT-C] Visual Analysis of Water Dispersion Patterns, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.15503304; Journal Preprint 3 of 11

[EXHIBIT-D] Bacterial and Fungal Contamination Assessment of Paper Towel Types, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.15504144; Journal Preprint 4 of 11

[EXHIBIT-E] Systematic Performance Failure in Commercial Hand Dryers, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17858443; Journal Preprint 5 of 11

[EXHIBIT-F] Baseline Water Mass on Freshly Washed Hands, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17858834; Journal Preprint 6 of 11

[EXHIBIT-G] An Empirical Refutation of Green Energy Claims, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17859198; Journal Preprint 7 of 11

[EXHIBIT-H] Catastrophic Time-To-Dry Failures via Bi-Modal Mechanism, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17869567; Journal Preprint 8 of 11

[EXHIBIT-I] Validation of Hand Dryer Microbial Amplification, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17859894; Journal Preprint 9 of 11

[EXHIBIT-J] The Wandering Plume of Filth, Blouch, R. A. Jr. (2025); DOI: 10.5281/zenodo.17860971; Journal Preprint 10 of 11

Complete List of Testing Data Files

[EXHIBIT-K] Complete Data File Index, Blouch 2025

Dryer Time Test Results Graphs

[EXHIBIT L] Comprehensive All-Trials Time-To-Dry Hand Dryer Data Graph

Petri Dish Images

[EXHIBIT-M] 136 Ambient Room Air Petri Dish Images Sampled In Front of Machines, Blouch, R. A. Jr. (2025)

[EXHIBIT-N] 60 Hand Dryer Output Air Jet Petri Dish Sample Images, Blouch, R. A. Jr. (2025)

[EXHIBIT-O] 28 Brown Paper Towel Petri Dish Sample Images, Blouch, R. A. Jr. (2025)

[EXHIBIT-P] 47 White Paper Towel Petri Dish Sample Images, Blouch, R. A. Jr. (2025)

Plume of Filth Images

[EXHIBIT-Q] Hand Dryer Plume of Filth Images

[EXHIBIT-R] Hand Dryer Mold Images with Corroborating Petri Dish Test Images

Comprehensive summary articles

[EXHIBIT-S] Comprehensive Hand Washing and Hand Drying Efficacy Studies, 59, AI, (December 2025)

[EXHIBIT-T] Comprehensive Functioning Hand Dryer Output Air Studies, 18, AI, (December 2025)

Lab Testing

[EXHIBIT-U] Hayes Microbial Consulting Report (EPA Laboratory ID: VA01419)

Evidence of Plaintiff Exposure

[EXHIBIT-V] Evidence of Plaintiff Exposure — Starbucks Rewards History + M&T Bank Statements

Standards documents

[EXHIBIT-W] UL PCR for Hand Dryers (July 13, 2016)

[EXHIBIT-X] NSF Protocol P335: Hygienic Commercial Hand Dryers (April 2007)

[EXHIBIT-Y] ISO 14025 Environmental Standards Principles and Procedures

[EXHIBIT-Z] ISO 14044 Life Cycle Assessment Requirements and Guidelines

Certifications

[EXHIBIT-AA] Smart EPD Certificate SmartEPD-2023-002-0006-01 (XLERATOR)

[EXHIBIT-BB] SGS Performance Test Report No. 2774929EFF-001 (Sept. 7, 2012)

[EXHIBIT-CC] UL Environment EPD No. 4787137936.102.1 — XLERATOR Hand Dryer certification; July 25, 2017

[EXHIBIT-DD] UL Environment EPD No. 4787616201.106.1 — Hokwang 2200 Hand Dryer certification; April 1 2022

[EXHIBIT-EE] TrueNorth Collective LCA (May 2023): Comparative Life Cycle Assessment of Hand Drying Systems: Excel Hand Dryers and Paper Towel Systems

[EXHIBIT-FF] MIT Materials Systems Laboratory Lifecycle Assessment — Document 6-1, September 2011.

[EXHIBIT-GG] NSF P335 Dyson Certified Live Listing 251231

[EXHIBIT-HH] XLERATOR LEED v4.1 Document

[EXHIBIT-II] DYSON LEED May 2014 Document

Collusion Network Structures

[EXHIBIT-JJ] Personnel and Committee Connections Master Reference Document

[EXHIBIT-KK] Standards and Certification Chronology UL to Smart EPD, Lasso, Blouch 2025

Defendant Source Documents

[EXHIBIT-LL] Anna Lasso, The First Sustainable Hand Dryer, Excel UK Website December 2025

Journalistic Industry Analysis and History

[EXHIBIT-MM] Hand dryers v paper towels, The Guardian_files, The Guardian, 25 April, 2019

Excel V Dyson Court Documents — Case_3:12-cv-30211-MAP_(D._Mass.)

[EXHIBIT-NN] Excel V Dyson Original Complaint, PACER

[EXHIBIT-OO] Denis Gagnon Affidavit Excel V Dyson, PACER

[EXHIBIT-PP] Toby Saville Affidavit Excel V Dyson, PACER

[EXHIBIT-PP-A] Toby Saville Claimed Dry Times Versus Ron Blouch Data, a Detailed Comparison

[EXHIBIT-QQ] Dyson's Answer, Statement of Defenses, and Counterclaims — Document filed February 22, 2013.

[EXHIBIT-RR] Defendant Dyson, Inc.'s Memorandum of Law in Opposition to Plaintiff Excel Dryer, Inc.'s Motion for Preliminary Injunction

[EXHIBIT-SS] Excel Reply to Dyson Opposition — Document 32, Filed February 4, 2013; includes Second Declaration of Denis Gagnon (Document 32-1)

[EXHIBIT-TT] MIT-QUANTIS Letter in response to dry time testing conflicts, 17 October 2012

[EXHIBIT-UU] Excel White Paper: "An Ultrafast, Comfortable Hand Dryer"

ITC Complaint

[EXHIBIT-VV] ITC COMPLAINT; Excel Dryer V Multiple Respondents, China; DN 3159; June 24, 2016

False Claims Summary Documents

[EXHIBIT-WW] False Advertising Claims Analysis Dyson

[EXHIBIT-XX] False Advertising Claims Analysis Excel

[EXHIBIT-YY] False Claims Analysis NSF with UL Supplemental Analysis

[EXHIBIT-ZZ] False Claims Supporting Screenshots and Document Images

Global Dryer Statistical Estimates

[EXHIBIT-AAA] US Dryer Use Estimates Annual and Per Use with microbe estimates, Blouch 2025

[EXHIBIT-BBB] US Dryer Use Estimates Annual and Per Use with energy estimates, Blouch 2025

[EXHIBIT-CCC] US Dryer Use Estimates Annual and Per Use with LEED estimates, Blouch 2025

Hokwang Dryer Product Sheets, UL

[EXHIBIT-DDD] Hokwang 2200W product sheet with UL certification, December 2025

[EXHIBIT-EEE] Hokwang high speed EcoHygiene product sheet without UL certification, December 2025

Journal Preprint

[EXHIBIT-FFF] Performance Failures in Commercial Hand Dryers: An Historical Synthesis and Sequential Summary Review of an Eleven-Study Research Program, Blouch, R. A. Jr. (2026); DOI: 10.5281/zenodo.18322481; Journal Preprint 11 of 11

[EXHIBIT-GGG] Dyson False Advertising Claims, Blouch 2025

[EXHIBIT-HHH] Excel False Advertising Claims, Blouch 2025

[EXHIBIT-III] NSF False advertising Claims, Blouch 2025

[EXHIBIT-JJJ] Screenshot False Advertising Claims Supporting Material

[EXHIBIT-KKK] Grand Central Terminal Excel Case Study

[EXHIBIT-LLL] US Green Building Council Excel Case Study

[EXHIBIT-MMM] Northwestern University Hospitals Excel Case Study

[EXHIBIT-NNN] Seabury Excel Case Study

[EXHIBIT-OOO] USDA Excel Case Study

[EXHIBIT-PPP] Dyson Energy Saving Signs

[EXHIBIT-QQQ] Excel Energy Savings Signs

[EXHIBIT-RRR] Gia AIRMID study

[EXHIBIT-SSS] Xlerator Hygiene Technical Data Sheet

[EXHIBIT-TTT] Unified Certifiers Civil Complaint, Blouch 2026