UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

BRIAN JACKSON, Individually, and as Personal Representative of the Estate of Doris Jackson, Deceased, **Plaintiff,** **v.** **COLGATE-PALMOLIVE COMPANY,** **Defendant.**	**Civil Action No. 15-01066 (TFH)**

MEMORANDUM OPINION

I. INTRODUCTION

In this products liability action, Plaintiff alleges that his mother developed mesothelioma due to asbestos exposure from her decades-long use of Cashmere Bouquet talcum powder, which was manufactured, marketed, and/or sold by Defendant Colgate-Palmolive Company ("Colgate") from 1871 through 1995. Plaintiff asserts causes of action against Colgate for negligence, strict liability, breach of implied warranty, wrongful death, and punitive damages. Am. Compl. [ECF No. 24].[1] Plaintiff has proffered Dr. Ronald Gordon, a pathologist and microscopist with a Ph.D. in biology and experimental pathology, as an expert to testify regarding his testing and analysis of various samples of Cashmere Bouquet-labeled talcum powder, as well as his analysis and opinions concerning Ms. Jackson's lung and lymph node tissue.

[1] This lawsuit was initially filed by Plaintiff's mother, Doris Jackson, on July 7, 2015. Following Ms. Jackson's death on October 28, 2015, Plaintiff Brian Jackson was substituted as Plaintiff. Order (Mar. 1, 2016) [ECF No. 21].

Presently pending before the Court are Colgate-Palmolive Company's *Daubert* Motion to Exclude Testimony of Plaintiff's Expert Dr. Ronald Gordon ("*Daubert* Motion") [ECF No. 49], Colgate-Palmolive Company's Motion *in Limine* to Preclude All Testimony and Evidence Regarding Purported Testing of Talc by Plaintiff's Testing Experts Because of Lack of Authenticity and Relevance of Talc Tested ("Colgate's Motion *in Limine*") [ECF No. 45],[2] and Plaintiff's Motion *in Limine* to Exclude Any Reference to Dr. Ronald Gordon's Criminal History and Related Matters ("Plaintiff's Motion *in Limine*") [ECF No. 55]. Upon full consideration of the parties' submissions, the oral arguments held on February 13, 2017 and March 1, 2017, the record in this case, and the applicable law, and for the reasons stated herein, the Court grants Colgate's *Daubert* Motion; grants in part and denies in part Colgate's Motion *in Limine*; and finds as moot Plaintiff's Motion *in Limine*.

II. *DAUBERT* MOTION

Colgate seeks exclusion of Dr. Gordon's opinions that (1) he detected asbestos in every Cashmere Bouquet-labeled talc sample he tested, and (2) Ms. Jackson's lymph node tissue contained the same type of asbestos he found in the talc and that the asbestos in the talc therefore caused Ms. Jackson's mesothelioma. *Daubert* Mot. 1 [ECF No. 49]. Colgate argues that Dr. Gordon's opinions are unreliable and should be excluded pursuant to *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993).

[2] Plaintiff originally proffered two testing experts in this case, but he withdrew Sean Fitzgerald as an expert on February 8, 2017. *See* Notice of Withdrawal [ECF No. 82]. Accordingly, the Court's analysis of Colgate's Motion *in Limine* only applies to the testing performed by Dr. Gordon.

a. Legal Standard for Admissibility of Expert Testimony

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. "The party offering the expert's testimony must establish by a preponderance of the evidence that the expert testimony is admissible. . . ." *McReynolds v. Sodexho Marriott Servs., Inc.*, 349 F. Supp. 2d 30, 35 (D.D.C. 2004); *see also Allison v. McGhan Med. Corp.*, 184 F.3d 1300, 1312 (11th Cir. 1999) ("[T]he proponent of the testimony does not have the burden of proving that it is scientifically correct, but that by a preponderance of the evidence, it is reliable"). Under Rule 702, "[a] district judge has broad discretion regarding the admission or exclusion of expert testimony, and reversal of a decision . . . is appropriate only when that discretion has been abused." *Joy v. Bell Helicopter Textron, Inc.*, 999 F.2d 549, 567 (D.C. Cir. 1993).

In *Daubert v. Merrell Dow Pharm., Inc.*, the Supreme Court explained that in applying Rule 702, "the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." 509 U.S. 579, 589 (1993). Expert testimony may not be based on "subjective belief and unsupported speculation," and instead must be "ground[ed] in the methods and procedures of science." *Id.* at 590. The *Daubert* court set forth a non-exclusive list of factors that courts may consider when evaluating scientific validity: "whether the theory or technique had been tested, whether it had been subjected to peer review and publication, the

method's known or potential error rate, and the method's general acceptance in the scientific community." *Meister v. Med. Eng'g Corp.*, 267 F.3d 1123, 1127 (D.C. Cir. 2001) (citing *Daubert*, 509 U.S. at 593-94). "[N]one of the factors discussed is necessarily applicable in every case or dispositive; nor are the four factors exhaustive." *Ambrosini v. Labarraque*, 101 F.3d 129, 134 (D.C. Cir. 1996).

But *Daubert* does not require that "judges become scientific experts, much less evaluators of the persuasiveness of an expert's conclusions." *Id*. Instead, courts are to focus on experts' "principles and methodology, not on the conclusions they generate." *Daubert*, 509 U.S. at 595.

b. Dr. Gordon's Qualifications

Dr. Gordon holds a doctorate with a focus on experimental pathology and biology from State University of New York, Stony Brook. *Daubert* Hr'g Tr. 4:5-4:6, Feb. 13, 2017 [ECF No. 86]. He is the director of the Electron Microscopy Core Facility in Pathology at Mount Sinai Hospital in New York City and also serves as a director for parts of the Mount Sinai Health System. *Id.* at 4:17-4:24. As part of his employment, Dr. Gordon performs clinical diagnoses in the Department of Pathology, conducts his own research, conducts collaborative research, and teaches pathology and electron microscopy. *Id.* He has worked with an electron microscope since 1972 and has published approximately 200 peer-reviewed papers. *Id.* at 6:17-6:22, 10:15-10:18. Dr. Gordon has used the same base methodology at issue here to test, *inter alia*, human tissue, floor tiles, drywall, auto v-belts, brakes, theater curtains, body filler, insulation, talcum powders, and cosmetics for the presence of asbestos. *Id.* at 19:21-20:5.

c. Asbestos Detection Methods

Asbestos is defined as the asbestiform variety of the following six naturally occurring minerals: chrysotile, crocidolite, amosite, tremolite, anthophyllite, and actinolite. Occupational Exposure to Asbestos, Tremolite, Anthophyllite and Actinolite, 57 Fed. Reg. 24310-01, 24316 (June 8, 1992); *see also* 29 C.F.R. § 1910.1001; 40 C.F.R. § 763.163. "Chrysotile belongs to the family of minerals called serpentine minerals. The remaining five minerals belong to the family of minerals called amphiboles." 57 Fed. Reg. at 24316.

Dr. Gordon has reported finding anthophyllite asbestos in all of the containers of Cashmere Bouquet-labeled talc he tested, "with many also containing tremolite asbestos and some even containing chrysotile type asbestos." Gordon Rep. 5 [ECF 58-3]. Dr. Gordon also reported finding tremolite asbestos fibers in Ms. Jackson's lymph node tissue. *Id.* at 23. A brief overview of several asbestos detection methods is instructive.

i. The United States Pharmacopeia Method

The Food and Drug Administration ("FDA") regulates the use of talc in cosmetics and utilizes the United States Pharmacopeia ("USP") method when testing talc for the presence of asbestos. *See* 21 U.S.C. § 321(i); 21 C.F.R. § 73.1550(b). As it is important to distinguish asbestos from a cleavage fragment, talc, or an accessory mineral, the USP method first requires an analyst to perform infrared absorption or x-ray diffraction ("XRD") on a sample of talc. USP Monograph 4826-27 [ECF No. 49-25]. If either test is positive, the analyst then proceeds to analyze the sample using a polarized light microscope ("PLM") to determine if it contains a population of fibers with the following asbestiform characteristics:

1) a range of length to width ratios of 20:1 to 100:1, or higher for fibers longer than 5 µm;

2) capability of splitting into very thin fibrils; and

3) two or more of the following criteria:

(i) parallel fibers occurring in bundles;

(ii) fiber bundles displaying frayed ends;

(iii) fibers in the form of thin needles; and

(iv) matted masses of individual fibers and/or fibers showing curvature.

Id.

Dr. Gordon challenges the USP method because he believes it is unreliable and can lead to potential false negative results. *Daubert* Hr'g Tr. at 54:23-55:20; 57:14-16, Feb. 13, 2007 [ECF No. 86]. Accordingly, Dr. Gordon did not use the USP method when testing the Cashmere Bouquet-labeled talc; instead, he performed his testing using a modified version of a method developed by George Yamate, et al., as set forth in *Methodology for the Measurement of Airborne Asbestos by Electron Microscopy* ("Yamate Method") [ECF No. 49-34].

ii. The Yamate Method

The Yamate Method contains three different levels of analysis, and each level involves examining a sample using an electron microscope. *Id*. at 5. Prior to testing, a sample is prepared and placed on an electron microscope grid. *Id.* The "counting rule" of the Yamate Method is a "minimum 100 fibrous structures per known area (complete grid opening) or 10 grid openings, whichever is first." *Id.* But "[f]or very low asbestos presence, or for asbestos contamination studies . . . counting 20 grid openings from each of 2 grids (10 per grid) is recommended." *Id.*

> Knowledge of the history, source and location of the sample, and the purpose and objective of the analysis aids in selecting the correct level of analytical effort. Simply "grinding the samples out" neither is cost-effective nor produces the best results, especially for Level II and Level III analyses. Instead of all Level I, all Level II, or all Level III, the majority of the analyses may be Level I, followed by some Level II. Level III could be used in its entirety or only at the analytical phase. If the source is known to contain no amphibole-type interference, or if chrysotile is of interest, gold-coating can be eliminated.

> If a legal proceeding is anticipated, Level III analysis will be required where a chain-of-custody record is kept from collection, transport to the laboratory, preparation, analysis, data reduction, and reporting of results. EM [electron microscope] finder grids must be used for grid transfer. In addition, for quality assurance, a second laboratory must be available for analyzing a portion of the sample using the same degree of custodial care. QC/QA [quality control/quality assurance] protocols must be observed and records kept.
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> Whenever possible, and especially for unknown source samples, 10 to 20% of each set of samples should be analyzed by Level II analysis prior to using Level I as a screening procedure.
>
> Level I is a relatively rapid procedure, and can be used by many laboratories with access to conventional TEM [transmission electron microscopy]. However, Level I results should not be used in legal proceedings. If "positives" or "false positives" are found, especially in areas where asbestos is known to be absent, and the field blank and laboratory blank have been checked, Level II analysis, and possibly Level III analysis, should be performed.

Id. All three levels of analysis require data to "be recorded in a systematic form so that they can be processed rapidly. Sample information, instrument parameters, and the sequence of operations should be tabulated for ease in data reduction and subsequent reporting of results." *Id.* at 21, 38.

1) Level I

Level I analysis "is a monitoring or screening technique" that utilizes morphology and selected area electron diffraction ("SAED") to analyze samples. *Id.* at 8, 17. For the morphology analysis, "a grid opening is selected at random" and is examined with an electron microscope to determine whether an asbestos structure is located within the opening." *Id*. at 19-20.[3] The analyst then performs SAED analysis to determine the pattern of the asbestos structure and classify it as chrysotile, amphibole group, ambiguous, or "no identification." *Id.*

[3] Asbestos structures recognized by the Yamate Method include fibers, bundles, clusters, and matrixes. Yamate Method at 17-18. A fiber as "a particle with an aspect ratio of 3:1 or greater, with substantially parallel sides"; a bundle is a "particulate composed of fibers in a

2) Level II

Level II analysis "is a regulatory technique consisting of Level I analysis plus chemical elemental analysis. Morphology, size, SAED pattern, and chemical analysis are performed sequentially." *Id.* at 24. The chemical analysis is performed using energy dispersive spectroscopy ("EDS"), which obtains "a spectrum of the x-rays generated by the asbestos structure. The profile of the spectrum is compared with profiles obtained from asbestos standards; the best (closest) match identifies and categorizes the structure." *Id.* at 37. Because "[a]sbestos has a varying elemental composition," EDS as used in asbestos analysis is "semiquantitative at best." *Id.* at 39.

3) Level III

Level III analysis "is an objective, confirmatory-type analysis and consists of Level II analysis plus quantitative SAED analysis from two different near-exact zone-axis orientations on a selected number of fibers identified for detailed SAED analysis during the course of Level II analysis." *Id.* at 44. The Yamate Method requires Level III analysis where legal proceedings are anticipated. *Id.* at 5. Zone-axis tilting physically tilts the fiber under the electron microscope to allow the analyst to obtain another view of the diffraction pattern for further evaluation and confidence: "[t]he primary emphasis in Level III analysis is on the positive identification of the amphibole type." *Id.* at 45.

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parallel arrangement with each fiber closer than the diameter of one fiber"; a cluster is a "particulate with fibers in a random arrangement such that all fibers are intermixed and no single fiber is isolated from the group"; and a matrix is "a fiber or fibers with one end free and the other end embedded or hidden by a particulate." *Id.*

4) Criteria for Selecting the Correct Level of Analysis

The Yamate Method sets forth the following criteria to be considered in selecting the correct level of analysis:

> Knowledge of the history, source and location of the sample, and the purpose and objective of the analysis aids in selecting the correct level of analytical effort. Simply "grinding the samples out" neither is cost-effective nor produces the best results, especially for Level II and Level III analyses. Instead of all Level I, all Level II, or all Level III, the majority of the analyses may be Level I, followed by some Level II. Level III could be used in its entirety or only at the analytical phase. If the source is known to contain no amphibole-type interference, or if chrysotile is of interest, gold-coating can be eliminated.
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> If a legal proceeding is anticipated, Level III analysis will be required where a chain-of-custody record is kept from collection, transport to the laboratory, preparation, analysis, data reduction, and reporting of results. EM [electron microscope] finder grids must be used for grid transfer. In addition, for quality assurance, a second laboratory must be available for analyzing a portion of the sample using the same degree of custodial care. QC/QA [quality control/quality assurance] protocols must be observed and records kept.
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> Whenever possible, and especially for unknown source samples, 10 to 20% of each set of samples should be analyzed by Level II analysis prior to using Level I as a screening procedure.
>
> Level I is a relatively rapid procedure, and can be used by many laboratories with access to conventional TEM [transmission electron microscopy]. However, Level I results should not be used in legal proceedings. If "positives" or "false positives" are found, especially in areas where asbestos is known to be absent, and the field blank and laboratory blank have been checked, Level II analysis, and possibly Level III analysis, should be performed.

Yamate Method at 5. All three levels of analysis require data to "be recorded in a systematic form so that they can be processed rapidly. Sample information, instrument parameters, and the sequence of operations should be tabulated for ease in data reduction and subsequent reporting of results." *Id.* at 21, 38.

5) Dr. Gordon's Modifications

As summarized in his 2014 article titled *Asbestos in Commercial Cosmetic Talcum Powder as a Cause of Mesothelioma in Women*, Dr. Gordon performed his testing of the talc samples using a "modified" Yamate Method. Gordon, Fitzgerald and Millette, *Asbestos in Commercial Cosmetic Talcum Powder as a Cause of Mesothelioma in Women,* Int'l J. Occup. & Envtl. Health 20 (4):318 (2014) [ECF No. 57-11]. Dr. Gordon explained that he followed a modified Level II analysis because it recommended essentially the same method he was already using – morphology, EDS, and SAED. *Daubert* Hr'g Tr. 63:24-64:10, Feb. 13, 2017. He did not feel that the zone-axis tilting required by Level III was necessary in his analysis because it would not "add anything more to the determination of the fiber types." *Id.* at 65:13-65:25. Instead, he utilized an "overlay" method by which he electronically placed a diffraction pattern from an internationally recognized control specimen of asbestos over the displayed pattern to compare the two. *Id.* at 67:23-69:16. Dr. Gordon also reviewed all of the grid openings on every grid of talc he tested, and he did not record the location of the grid openings containing the fibers he determined to be asbestos. *Daubert* Hr'g Tr. 52:18-52:24, 76:5-76:25, Feb. 13, 2017.

d. Dr. Gordon's Product Contamination Opinion

Using the modified methodology described above, Dr. Gordon tested over 50 containers of Cashmere Bouquet-labeled talc and "found asbestos fibers in all those containers," specifically anthophyllite, tremolite, and chrysotile. Gordon Rep. 5 [ECF No. 58-3]. Dr. Gordon extrapolates these findings to conclude that "every container of Cashmere Bouquet contained some amount of asbestos." *See, e.g.*, Pl.'s Supp. 1, 4 [ECF No. 90]. The Court finds that Dr. Gordon's product contamination opinion is unreliable and should therefore be excluded under *Daubert* for two independent reasons: (1) his testing method failed to reliably distinguish talc

from asbestos; and (2) his testing results are not verifiable because he failed to record the location of the grid openings containing the fibers he determined to be asbestos.

i. Failure to reliably distinguish talc from asbestos

Colgate argues that the "modified" Yamate Method employed by Dr. Gordon "does not account for the well-known risks of false positives." *Daubert* Mot. at 15 [ECF No. 49]. The Court agrees. By its terms, the Yamate Method requires the Level III quantitative SAED analysis "for confirming asbestos identification, especially in judicial controversies and other special situations." Yamate Method at 4 [ECF No. 49-34]. Although Dr. Gordon testified that by not performing the zone-axis tilt, he was under-counting the anthophyllite, if anything, rather than possibly over-counting it, *id.* at 80:13-81:1, the Court finds that by failing to perform the zone-axis SAED analysis required by Yamate Level III, Dr. Gordon failed to reliably distinguish talc from anthophyllite. *See* World Health Organization, IARC Monographs Vol. 93 at 286 ("Talc platelets on end and talc intergrown with amphibole in fibrous talc have complex electron diffraction patterns that may resemble other silicates, including amphiboles . . . unless carefully indexed."); *Daubert* Hr'g Tr. 111:12-112:9, Feb. 13, 2017; *see also Hanson v. Colgate-Palmolive Co.*, 353 F. Supp. 3d 1273, 1285-1287 (M.D. Ga. 2018). There is no dispute that Dr. Gordon did not perform this indexing, *Daubert* Hr'g Tr. 115:13-16, Feb. 13, 2017, and by forgoing the quantitative SAED analysis required by Yamate Level III, he did not reliably confirm (or disconfirm) his identification of asbestos in the talc at issue. Accordingly, his product contamination opinion will be excluded.

ii. Failure to properly record testing results

The Court finds that Dr. Gordon's product contamination opinion should also be excluded as unreliable under *Daubert* due to his failure to record the locations of the grid

openings containing the fibers he identified as asbestos. Colgate argues that "Dr. Gordon's failure to comply with the Yamate method's recordkeeping requirements is yet another digression from generally accepted methods" and "makes it impossible for another scientist to verify or replicate his results." *Daubert* Mot. at 32 [ECF No. 49]. It is undisputed that Dr. Gordon did not follow the Yamate Method's data recording protocols. Gordon Dep. 166:19-23, Mar. 20, 2015 [ECF No. 49-15].[4] In fact, he did not record the grid location of *any* fibers he identified as asbestos during his testing. *Id.* at 163:19-22.[5] Accordingly, Dr. Gordon admits that the only way for another analyst to potentially review his testing and confirm whether a particular fiber was asbestos would be to re-inspect each one of the thousands of grid openings he reviewed. *Id.* at 163:23-165:13; *see also Daubert* Hr'g Tr. 121:20-122:3, Feb. 13, 2017 [ECF No. 86].

Plaintiff argues that Dr. Gordon's failure to record the location of the asbestos fibers does not render his testing results unverifiable: "[A]ny reviewer of Dr. Gordon's grids would need to do as he did: review each grid opening – the only thing required to review Dr. Gordon's analysis is time." Pl.'s Opp'n at 19 [ECF No. 58]. But Dr. Gordon himself has admitted it may not be possible for another analyst to review the grids and verify his results because of damage that can occur to the grids:

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[4] Additionally, rather than follow the Yamate Method's "counting rule," Dr. Gordon typically counted 500 grid openings (or more) for each sample of talc to get the analytical sensitivity needed to register whether asbestos was present in a given sample of talc. *Daubert* Hr'g Tr. 40:24-41:10, Feb. 13, 2017.

[5] Plaintiff also argues that "[r]ecording the specific locations of fibers found on a grid is a matter of analyst preference and not of scientific mandate." Pl.'s Opp'n at 20. But the Yamate Method that Dr. Gordon chose to follow clearly states that data should "be recorded in a systematic form so that they can be processed rapidly. Sample information, instrument parameters, and the sequence of operations should be tabulated for ease in data reduction and subsequent reporting of results." Yamate Method at 21, 38.

Q: And for all of the fibers that you identified and all of that testing, you didn't identify in which grid opening you found any particular fiber, did you?

A: Correct.

Q: And so if someone wanted to confirm your assessment or hypothesis as to whether or not a particular fiber was or was not asbestos, they wouldn't be able to find a grid opening in the fiber, would they?

A: If they looked at all of them, they might.

Q: And they might not.

A: And they may not.

Because in transport and everything else, the fiber could have come off, or the – from doing the analysis by the way that I do, the grid opening may crack.

Gordon Dep. 163:19-164:8, Mar. 20, 2015 [ECF No. 49-15]. Accordingly, it is clear to the Court that Dr. Gordon's product testing results are not reproducible and must therefore be excluded as unreliable. *See Hanson*, 353 F. Supp. 3d at 1284 ("Without location information, Dr. Gordon's findings are supported merely by his personal assurances he found asbestos fibers somewhere in the thousands of grid openings. This is exactly the sort of chicanery and *ipse dixit* the Court must exclude."); *see also United States v. Hebshie*, 754 F. Supp. 2d 89, 125 (D. Mass. 2010) ("Documentation is necessary to test a hypothesis; in fact, reproducibility is the *sine qua non* of 'science.'"). For these reasons, Dr. Gordon's product contamination opinion shall be excluded.

e. Dr. Gordon's Tissue Testing and Specific Causation Opinion

Dr. Gordon opines that Ms. Jackson was exposed to tremolite asbestos above background levels, that Ms. Jackson had mesothelioma caused by asbestos, and that his findings of asbestos in the vintage talc samples are consistent with his findings of asbestos in Ms. Jackson's lymph node tissue. *Daubert* Hr'g Tr. 89:12-89:18, 95:2-95:13, 100:21-101:1, Feb. 13, 2017; *see also*

Gordon Rep. 24 ("[I]t is my opinion that Ms. Jackson had a significant exposure to asbestos. It is my opinion with a reasonable degree of scientific certainty that the asbestos fibers were the causative factor in the development of Ms. Jackson's malignant mesothelioma. This finding of tremolite as well as talc is consistent with exposure to cosmetic talcum powder products, including Cashmere Bouquet.").

i. Tissue Testing

Dr. Gordon received 0.04 grams of Ms. Jackson's lung tissue and 0.22 grams of her lymph node tissue for testing purposes. *Daubert* Hr'g Tr. 83:3-83:18, Feb. 13, 2017. After separating the tissue from the particulate material contained in it, Dr. Gordon analyzed the samples using the same methodology used for his talc testing. [6] *Id.* at 20:6-21:8. During his analysis of Ms. Jackson's lung tissue, Dr. Gordon detected talc, but not asbestos. *Id.* at 84:20-84:22.[7] Dr. Gordon detected one fiber of tremolite asbestos in Ms. Jackson's lymph node tissue, and he then extrapolated that finding to conclude that "[e]lectron microscopic analysis of the lymph node tissue revealed amphibole type asbestos fibers in a calculated concentration of 9409 fibers per gram wet weight with a limit of detection of 9409 fibers per gram wet weight." Gordon Rep. 23; *Daubert* Hr'g Tr. 85:19-87:10, Feb. 13, 2017.

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[6] The Court's findings regarding the reliability issues arising from Dr. Gordon's talc testing methodology also apply here in relation to his tissue testing.

[7] *See* Gordon Rep. 23 ("Electron microscope analysis of the lung tissue did not reveal any asbestos fibers above the limit of detection of 6900 fibers per gram wet weight. However, there were a number of very small asbestos fibers identified as chrysotile by energy dispersive spectroscopy (EDS) and SAED analysis. These fibers were not counted because they were less than 1 micrometer in length. Talc, aluminum silicates and silica were also observed but not counted.").

ii. Specific Causation Opinion

Dr. Gordon's specific causation opinion (i.e., that Ms. Jackson's mesothelioma was caused by her exposure to asbestos in Cashmere Bouquet) purports to rely on the Helsinki Criteria. *See Asbestos, asbestosis, and cancer: the Helsinki Criteria for diagnosis and attribution*, Scand J Work Environ Health 1997 [ECF No. 49-42]; *see also Daubert* Hr'g Tr. 146:15-20, Feb. 13, 2017. The Helsinki Criteria was introduced by experts in a 1997 consensus report that was published following the International Expert Meeting on Asbestos, Asbestosis, and Cancer, which was convened "to discuss disorders of the lung and pleura in association with asbestos and to agree upon state-of-the-art criteria for their diagnosis and attribution with respect to asbestos." *Helsinki* at 1. In order to attribute mesothelioma to asbestos exposure, the Helsinki Criteria explains that

> [a] lung fiber count exceeding the background range for the laboratory in question *or* the presence of radiographic or pathological evidence of asbestos-related tissue injury (eg, asbestosis or pleural plaques) *or* histopathologic evidence of abnormal asbestos content (eg, asbestos bodies in histologic sections of lung) should be sufficient to relate a case of pleural mesothelioma to asbestos exposure on a probability basis. In the absence of such markers, a history of significant occupational, domestic, or environmental exposure to asbestos will suffice for attribution.

Id. at 4.

There is no evidence that Ms. Jackson had asbestos fibers in her lungs, asbestosis or pleural plaques, or asbestos bodies in her lungs. Dr. Gordon's specific causation opinion, therefore, is based on the single tremolite asbestos fiber he detected in Ms. Jackson's lymph node tissue, which he contends establishes that "Ms. Jackson had an above background exposure to asbestos." *Daubert* Hr'g Tr. 160:15-19, Feb. 13, 2017.

First, Dr. Gordon's specific causation opinion does not meet the Helsinki Criteria's requirements for attributing Ms. Jackson's mesothelioma to asbestos exposure because he failed

to locate any asbestos fibers in Ms. Jackson's lung tissue. Dr. Gordon himself has admitted that "Helsinki, as written, does not support [his] conclusion that [Ms. Jackson] was exposed to asbestos above background based upon [his] findings in lung tissue." Gordon Dep. 210:17-24, Sept. 29, 2016 [ECF No. 49-33]. Although Plaintiff contends that "it is entirely possible" that Dr. Gordon would have found asbestos fibers in Ms. Jackson's lung tissue if he had received a larger volume of tissue to examine, such speculation cannot serve as the basis for his causation opinion.

Second, even if the finding of a single asbestos fiber in Ms. Jackson's lymph node tissue was sufficient under Helsinki to attribute Ms. Jackson's mesothelioma to asbestos exposure, the laboratory control group relied upon by Dr. Gordon to support his opinion that Ms. Jackson had an above background exposure to asbestos suffers from several material defects that render its use inadmissible. As the court succinctly explained in *Hanson v. Colgate-Palmolive Company*, in which Dr. Gordon's use of the same control group at issue here was challenged by Colgate:

> [W]ith respect to the first Helsinki criterion, Dr. Gordon's finding of above-background asbestos levels in Mrs. Hanson's lungs relies on a control group of his own creation for which there are too many unanswered questions and hallmarks of impropriety. Dr. Gordon's current control group consists of thirty-five patients who have been "documented" not to have any evidence of asbestos exposure based on "histories taken by trained individuals, trained MDs ...." (Id. at 128:9-16.) But Dr. Gordon does not have any documentation of their medical or exposure histories. (Id. at 139:2-11.) Documentation is limited to age range, gender, a list of "means and ranges," and fiber analysis worksheets. (Id. at 139:9-11; 140:23-141:16.) Dr. Gordon has never submitted his control group to the scientific community or had the group peer reviewed. (Id. at 136:25-138:1.)
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> While it is true a valid control group must consist of persons without lung disease who have no history of exposure to asbestos, Dr. Gordon's entire control group is pristine with respect to asbestos, meaning no one returned a tissue sample with any countable asbestos fibers. (Gordon Brandt Testimony 7/12/2017, doc. no. 67-3, p. 28:2-4.) Dr. Gordon admits there is no control group in the world other than his where the members have no countable asbestos fibers. (Id. at 27:4-15.) Dr. Gordon explains "no other laboratory depends on results that are even current" and "if they

> did it the way I did it, they probably would" have no countable asbestos fibers in their control group. (Id.)
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> Dr. Gordon's control group previously exceeded 200 people and had members with countable asbestos fibers. (Id. at 16:23-25.) Dr. Gordon admits "some" of the decrease from 200 to thirty-five occurred when he discovered members had countable asbestos fibers, and he further admits none of those removed suffered an asbestos-related disease necessitating their removal from the control group. (Id. at 18:5-8.) Dr. Gordon explains the reduction from 200 to thirty-five patients was warranted because he never found anybody with countable asbestos fibers caused by background sources since the 1980s. (Id. at 17:5-10.) Nevertheless, Dr. Gordon has co-authored studies where countable asbestos fibers were detected in tissue of the background group. (Id. at 18:9-12.)
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> Dr. Gordon admits the amount of background asbestos can vary depending on where a person lives. (Gordon Dep. 5/1/2017, p. 135:3-6.) Nevertheless, even though asbestos would be part of the ambient air for a person living near a factory using or producing asbestos products, according to Dr. Gordon, the person could not represent "true background." (Id. at 130:14-20.) Thus, Dr. Gordon testified only people who have "never had any contact with asbestos of any kind" can create "true background levels." (Id. at 131:6-8.) As a result, a finding of a single countable asbestos fiber exceeds the background established by Dr. Gordon's current control group. (Id. at 127:14-16.)
>
> Dr. Gordon's control group appears from the circumstances to be a creation of his own making designed to generate a pristine environment where a single countable asbestos fiber exceeds background levels. The control group has not been peer reviewed, and Dr. Gordon's penchant for little to no documentation of his work makes it impossible for defense experts to conduct a meaningful review of the selection process for the original group of 200 or the winnowing to the current group of thirty-five. The Court has no reasonable assurance the control group accurately reflects background levels in the general population.

353 F. Supp. 3d at 1289 (some internal citations omitted); *see also Daubert* Hr'g Tr. 90:10-91:25, Feb. 13, 2017; *Daubert* Hr'g Tr. 19:10-22:4, Mar. 1, 2017 [ECF No. 91]. Here, the Court shares the same concerns as the *Hanson* Court regarding the reliability of Dr. Gordon's control group. While Plaintiff argues that these issues are more appropriate for the jury to consider as it weighs the opinions of the parties' competing experts, the Court disagrees. It will not permit any testimony related to or relying on Dr. Gordon's control group.

Finally, there is one additional aspect of Helsinki that allows for attribution of mesothelioma to significant asbestos exposure: the patient's history. *Helsinki* at 4 [ECF No. 49-42]. Dr. Gordon places significant weight on this factor in formulating his causation opinion:

> I reviewed both the discovery and the video deposition testimony of Ms. Jackson. In reviewing the exposure information, I noted the following facts, which I will assume to be true for purposes of formulating an opinion concerning the causation of her malignant mesothelioma. This is not meant to be a comprehensive, a material science report, mineralogy report, or a specific product identification report. It is simply a qualitative demonstration of the kinds of exposure reported in her deposition.
>
> According to her deposition testimony, Ms. Jackson used Cashmere Bouquet body talcum powder on a daily basis from the 1940s to approximately 1990. She would shake out the powder during its application while in her bathrooms after showering and bathing. Ms. Jackson is not aware of any other exposures to asbestos in her lifetime, either occupationally or para-occupationally. She was examined at length in her depositions regarding all potential exposures she sustained or might have sustained in her lifetime.

Gordon Rep. 5. But, as revealed during discovery, Dr. Gordon was entirely unaware that either Ms. Jackson or a member of her family represented that she had been exposed to asbestos from "[c]eiling pipes with degrading insulation" during her more than thirty-year career as a school teacher in the D.C. Public School system. *Daubert* Hr'g Tr. 162:2-165:20, Feb. 13, 2017. Dr. Gordon's opinion failed to take this information regarding Ms. Jackson's reported occupational exposure into account, and attributing her mesothelioma solely to her used of Cashmere Bouquet fails to satisfy the Helsinki Criteria.

For these reasons, the Court finds that Dr. Gordon's specific causation opinion is unreliable under *Daubert*, and it shall be excluded.

III. COLGATE'S MOTION *IN LIMINE*

Although the Court has excluded Dr. Gordon's product contamination opinion for the reasons detailed above, thereby mooting many of the issues presented in the pending Motion *in*

Limine to Preclude All Testimony and Evidence Regarding Purported Testing of Talc by Plaintiff's Testing Experts Because of Lack of Authenticity and Relevance of Talc Tested [ECF No. 45], the Court will now proceed to its analysis of the authenticity of the talc samples tested by Dr. Gordon.

To substantiate his claims, Plaintiff does not rely on testing of specific containers of Cashmere Bouquet used by his mother, but instead on Dr. Gordon's testing of samples of talcum powder obtained through other sources. Those sources can be grouped into four general categories: (1) talc from Cashmere Bouquet containers purchased by law firms on the internet or at antique fairs; (2) talc from Cashmere Bouquet containers that had previously been maintained in display cases at Colgate facilities and offices; (3) talc from vintage Cashmere Bouquet containers, and a container of "AGI 1615" talc that were stored in a lab at the Mount Sinai School of Medicine; and (4) talc from a Cashmere Bouquet container claimed to have been discovered by Kristi Lescalleet, a plaintiff in another lawsuit against Colgate that was filed in Maryland state court.

Colgate argues that the testimony and evidence related to Dr. Gordon's testing of the various talcum powder samples should be excluded because the authenticity of the talcum powder cannot be established due to decades-long gaps in the chains of custody. It follows, then, Colgate argues, that if the talcum powder samples tested by Dr. Gordon cannot be properly authenticated as Cashmere Bouquet in its original form, the results of his testing are simply not relevant. Plaintiff opposes the motion, arguing that there is sufficient evidence to establish that the samples are authentic, and that the challenges raised by Colgate go to the weight of the evidence, not its admissibility, and should therefore be determined by the jury.

a. Legal Standard

The Court must first identify the appropriate standard to apply in determining whether an expert witness may testify about the results of analyses of physical evidence when that physical evidence will not otherwise be introduced at trial. Colgate asserts that the Court should look to Federal Rule of Evidence 901, which states that "[t]o satisfy the requirement of authenticating or identifying an item of evidence, the proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is," Fed. R. Evid. 901(a), and relevant case law concerning admissibility of tangible objects. Mot. *in Limine* 8-10 [ECF No. 45]. Such evidence is often presented in the form of "chain of custody" documentation or testimony.

Plaintiff, on the other hand, urges the Court to consider Federal Rule of Evidence 703, which states in part:

> An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would *reasonably rely* on those kinds of facts or data in forming an opinion on the subject, *they need not be admissible for the opinion to be admitted*.

Fed. R. Evid. 703 (emphasis added). Placing emphasis on the second sentence of Rule 703, Plaintiff argues that because the samples of talcum powder themselves will not be introduced into evidence at trial, authentication and "rigid" chain of custody requirements are not applicable. Opp'n to Mot. *in Limine* 26-28 [ECF No. 57].

While Rule 703 does afford experts the ability to testify based on evidence that may not otherwise be admissible, the proponent of the testimony must first establish that the expert's reliance on the subject evidence is reasonable. Accordingly, Plaintiff must establish that the talcum powder samples could be reasonably relied upon by Dr. Gordon as authentic Cashmere Bouquet in its original form. Absent such a showing, his testimony would simply be unreliable. So, although it is not conducting an admissibility analysis under Rule 901, it is proper for the

Court to evaluate "chain of custody" type evidence to determine whether the talcum powder samples at issue presented a reliable basis for Gordon's opinions.

In a chain of custody claim, the party presenting the evidence has the burden to show that the evidence is "still what the proponent claims it to be," but a "complete chain of custody need not always be proved." *United States v. Mejia*, 597 F.3d 1329, 1336 (D.C. Cir. 2010) (quoting 2 McCormick on Evid. § 213 (6th ed. 2009)). "The proponent of the evidence need only 'demonstrate that, as a matter of reasonable probability, possibilities of misidentification and adulteration have been eliminated.'" *United States v. Mitchell*, 816 F.3d 865, 872 (D.C. Cir. 2016), *cert. denied*, 137 S. Ct. 532 (2016) (quoting *Mejia*, 597 F.3d at 1336 (internal quotation marks omitted)). Indeed, "gaps in the chain of custody normally go to the weight of the evidence rather than its admissibility." *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 311, n.1 (2009) (citation omitted). The Court now turns to the parties' arguments.

b. The Parties' Arguments

From the outset, Colgate accepts that the vintage Cashmere Bouquet containers themselves "could possibly be" authentic. Reply 8 [ECF No. 73]. Colgate, however, strenuously challenges the purported originality of the talc inside the containers. Colgate points to the decades-long gaps in the chains of custody, the characteristics of certain containers, testimony that asbestos exists in ambient air, and the "community of vintage talc container collectors who refill antique containers with other talc for display purposes." Mot. *in Limine* 5, 14-15; Reply 9.

In response, Plaintiff does not rely on chain of custody evidence. Instead, he presents evidence and argument in the vein of "distinctive characteristics and the like."[8] Opp'n at 11; *see also* Fed. R. Evid. 901(b)(4). Based on Ms. Jackson's memory, the packaging and contents of Cashmere Bouquet containers she used were consistent with the look and contents of the vintage containers offered here. Opp'n at 11 (citing D. Jackson Dep. 92:8-95:18, Sept. 28, 2016 [ECF No. 57-17]; D. Jackson Video Dep. 44:10-44:19, Sept. 29, 2016 [ECF No. 57-16]). The packaging of the vintage containers also matches images published by Colgate in its Annual Reports. *Id.* at 12 n.35. Colgate does not dispute this.

Plaintiff offers additional testimony and documents, or purported "indicia of reliability," in an attempt to connect the tested contents of the vintage containers, for which there are no chains of custody, to known Cashmere Bouquet samples and sources. Opp'n at 5. To assess whether the facts and assertions presented are indeed "indicia of reliability," certain background information related to talc sources, historic testing results, and container type is necessary.

c. Background Facts

i. Historic Cashmere Bouquet Sources and Testing Results

Historically, Colgate purchased the talc used in Cashmere Bouquet from a number of suppliers in the United States. Those suppliers in turn sourced talc from mines located in the Val Chisone region of Italy; Regal, North Carolina; and Willow Creek, Montana. *See* Cashmere Bouquet Formula Sheets dated 9/26/68, 7/29/70, 4/6/72 [ECF No. 57-20]; Def.'s Resp. to Req.

[8] Plaintiff also argues that Colgate has "admitted the authenticity of the contents of the historical containers" through stipulations in other courts. Opp'n at 6. The Court disagrees and will not consider any prior stipulations or purported stipulations of authenticity in other courts or through circumstantial inferences. *See United States v. Kanu*, 695 F.3d 74, 78 (D.C. Cir. 2012) ("District courts . . . are vested with broad discretion in determining whether to hold a party to a stipulation. . . .") (quoting *Wheeler v. John Deere Co.*, 935 F.2d 1090, 1098 (10th Cir. 1991)).

for Admissions Nos. 35-38 [ECF No. 57-15]; Capdevielle Dep. 198:11-211:16, Jan. 23, 2015 [ECF No. 57-18]; Trial Tr. 656:14-657:11, *Winkle v. Calaveras Asbestos, LTD*, Case No. BC549253, (Super. Ct. of Cal., LA Cty. April 16, 2015) [ECF No. 57-21].

Colgate and its suppliers periodically tested the talc for asbestos. Colgate's internal testing in the late 1960s and early-to-middle-1970s periodically found North Carolina talc "positive for tremolite" asbestos, Montana talc "positive for anthophyllite & tremolite" asbestos, and Italian talc "positive for tremolite" asbestos. Capdevielle Dep. 104:24-106:2, 177:10-177:20 (Jan. 23, 2015); *Winkle* Trial Tr. 860:26-861:17, 867:3-875:26, 881:22-886:10, 1068:13-1069:11; Colgate Lab Notebook 3-3388, entries on 9/20/71, 1/27/76, 3/5/76, 3/7/76, 10/27/76; Johns Manville October 1968 Petrographic Examination [ECF No. 57-26]. In 1976, Colgate tested a known sample of Cashmere Bouquet previously obtained by the Cosmetic Toiletries and Fragrance Association. That testing revealed tremolite and anthophyllite asbestos. Colgate Lab Notebook 3-3388, entry on 3/25/76; *Winkle* Trial Tr. 886:11-888:22, 1066:2-1068:12. With respect to the Italian talc, Keith Lehman, an ore miller for talc purchased by Colgate, testified that at one point in 1986 the Italian talc was tested for asbestos and the results came back positive for tremolite. Lehman Dep. Vol. 1, 25:9-28:11, 74:1-16, 142:9-145:13, Sept. 8, 2011; Vol. 3, 488:16-490:2, Sept. 23, 2011 [ECF No. 57-24].

Colgate also used outside labs to test its talc for purity and asbestos. From 1974 through 1984, Colgate sent or had samples of ore and finished Cashmere Bouquet sent to McCrone Associates labs for analysis. Opp'n to Mot. *in Limine* 15. While the origin of the talc was not always specified, the samples included Italian talc and North Carolina talc. In the years of 1974, 1976, 1977, 1981, 1983, and 1984, some of those samples tested positive for tremolite and chrysotile asbestos. Capdevielle Dep. 106:13-117:5, 122:1-124:22, 125:14-138:7, 144:20-

149:20, 162:20-167:6, 180:17-183:3, and attached Exs. 6, 7, 9-13 (Jan. 23, 2015); *Winkle* Trial Tr. 694:15-20, 695:15-697:24, 698:12-701:5, 867:3-875:26, 911:9-913:8.

ii. Types of Cashmere Bouquet Containers Sold into the Market

Colgate sold Cashmere Bouquet in tin shaker containers, plastic bottle containers, and round dusting containers with a powder puff.[9] *See generally,* Samples Chart [ECF No. 45-7].

Former Colgate employee Charles "Bud" Manson personally observed Cashmere Bouquet packaging at Colgate's New Jersey plant from roughly 1955 into the late 1970s and testified that he observed each type of packaging during his multi-decade career. Manson Dep. 18:1-24:16, Jan. 18, 2017 [ECF No. 78-1].

First, Mr. Manson testified regarding the tin shaker containers. He stated that the tin shaker containers can be opened in two places: a smaller shaker opening at the top of the "neck" of the container, and a seam spanning the entire circumference of the can at the "shoulder." *Id.* 47:9-47:16, 50:7-55:6. At the manufacturing plant, the tins were quickly filled while open at the shoulder. *Id.* The neck was then placed on top of the tin. *Id.* To use the container, one would remove the cap from the top of the neck to expose the shaker holes. *Id.*

[9] From left to right: tin shaker FA13-17; plastic bottle FA12-33; and round dusting powder container FA13-07.

Mr. Manson also testified regarding the plastic bottle packaging. The plastic bottles have one opening at the top covered by a plastic cap that was pushed or snapped on, not screwed into place. *Id.* at 59:7-60:14. Unlike the shoulder seams on the tin shakers, the caps on the plastic bottles were not designed to be removed and cannot be removed simply by pulling. *Id.* at 61:9-62:8. This more modern-style cap can only be removed with a tool. *Id.* Typical use involves rotating the cap to line up the pour holes, while further rotation closes the bottle. *Id.* at 60:1-60:14.

Finally, Mr. Manson testified regarding the packaging of the round dusting powder containers. The round containers open like a clamshell or have a removable lid. *See* Samples Chart [ECF No. 45-7]; Manson Dep. 78:16-83:5. Both opening mechanisms expose the entire container of talc for use with an included powder puff. Manson Dep. 78:16-83:5. Mr. Manson testified that after the rounds were filled with talc, a line worker manually placed a "diaphragm" into the package to "seal the powder from the air." *Id.* He described the diaphragm as "friction fit," as opposed to a glued-in-place seal, and stated that it "fit inside the container tightly" and the presence of the barrier prevented powder from spilling and kept the powder puff clean. *Id.* Mr. Manson further testified that when he would open the containers to inspect them, he would cut the diaphragm rather than pull it out. *Id.* at 78:9-82:18. Dr. Gordon tested talc from all three types of containers.

d. Samples at Issue in Litigation

i. Vintage Cashmere Bouquet Containers Purchased by Law Firms

Between 2008 and 2012, various law firms purchased 19 vintage Cashmere Bouquet containers from the internet and from an antique store. Mot. *in Limine* 4 (citing Samples Chart ¶¶ 1, 3-15, 35, 36, 39, 45, 46 [ECF No. 45-7]). Those containers have approximate

manufacturing dates from the 1930s through the mid-1970s.[10] *Id.* It is undisputed that the containers are many years old and that the purchasing law firms were not the original buyers. *Id.* at 4-5. There is no evidence in the record establishing how the containers were stored or maintained in the time between when they were originally purchased or obtained through the date they came into the various law firms' control. *Id.* at 5.

Some of the round dusting powder containers contained an unadulterated paper or plastic diaphragm prior to testing. Pl.'s Suppl. Mot. to Suppl. Opp'n 3 [ECF No. 78]; Dr. Gordon FA 10-42 [ECF No. 57-50]; Dr. Gordon FA 12-25 [ECF No. 57-39]; Dr. Gordon FA 12-26 [ECF No. 57-40]; QuanTEM 254315 [ECF No. 57-49].

ii. Vintage Cashmere Bouquet Containers Produced by Colgate in Discovery

Colgate also produced 23 vintage Cashmere Bouquet containers in response to discovery requests from plaintiffs in prior lawsuits. *See* Samples Chart [ECF No. 45-7]. Those containers date from the early-mid 1950s to the early 1990s and "were drawn from collections of miscellaneous containers of Colgate's current and former products (not limited to Cashmere Bouquet) maintained by Colgate's Corporate Communications Department and often displayed as 'memorabilia' in Colgate facilities." Mot. *in Limine* 6. Some of the containers are tin, some are plastic, and a few are round dusting powder containers. *See* Samples Chart. Although all of the containers produced by Colgate had "been opened either before or during the time Colgate maintained them," Colgate does not suggest that its employees refilled the containers, and there

[10] Colgate has approximated the manufacturing dates of the containers, without dispute from Plaintiff, based on Colgate's annual reports. Samples Chart 1 n.4 [ECF No. 45-7]. Those reports typically include pictures of Colgate-manufactured products, and other published, dated photographs of Cashmere Bouquet containers over time. *Id.*

has been no evidence presented to the Court that the caps on any of the plastic containers had been forcibly removed. Mot. *in Limine* 6.

iii. Samples Stored at Mount Sinai School of Medicine

Dr. Gordon also tested three samples of talc that at one point were stored in the Mount Sinai School of Medicine. One sample came from a container labeled "AGI 1615," and the other two came from vintage Cashmere Bouquet containers. Langer Aff. ¶¶ 3-4 (Sept. 2, 2015) [ECF No. 45-24]; Nolan Cert. ¶¶ 2, 3 (Sept. 26, 2013) [ECF No. 45-12]; Samples Chart FA13-44, FA13-43 [ECF No. 45-7]. The samples were originally held in the laboratory of Dr. Robert Nolan, a researcher at Mount Sinai School of Medicine who was conducting research regarding known asbestos-containing materials in occupational settings. Langer Dep. 36:7-37:19 (June 14, 2013) [ECF No. 45-25]. From 1977 through 1996, the vintage containers and the AGI 1615 sample were stored in unlocked drawers in labs at both Mount Sinai School of Medicine and Brooklyn College. Nolan Dep. 233:7-234:15 (Sept. 12, 2013) [ECF No. 45-26]; Nolan Cert. ¶¶ 3, 5 (Sept. 26, 2013); Langer Dep. 55:20-56:9 (June 14, 2013); Langer Aff. ¶¶ 7-11 (Sept. 2, 2015). Samples of asbestos-containing products were stored in the same drawers as the talc samples. Langer Dep. 55:20-56:16 (June 14, 2013); Langer Aff. ¶¶ 3, 9, 11 (Sept. 2, 2015). There is no evidence in the record that the talc samples were microscopically shielded or otherwise protected in any way from the asbestos-containing materials. In 1996, the AGI 1615 sample and the vintage containers were transferred to a commercial storage space in Secaucus, New Jersey, where they sat until Dr. Nolan retrieved them for purposes of litigation on May 7, 2013. Nolan Cert. ¶¶ 6-7 (Sept. 26, 2013); Nolan Dep. 38:1-40:14 (June 21, 2013) [ECF No. 57-51]; Samples Chart 13 [ECF No. 45-7].

iv. The Kristi Lescalleet Sample

This sample of talc was brought to light by a plaintiff in a lawsuit in the Circuit Court for Baltimore City, Maryland. In that case, one of the plaintiffs, Kristi Lescalleet, was deposed twice. In her first deposition, she testified that she did not have any old tins or other containers of Cashmere Bouquet. Lescalleet Dep. 61:1-61:5, Feb. 7, 2012 [ECF No. 45-13]. In her second deposition, however, she claimed to have discovered a Cashmere Bouquet container dating from the 1970s in her basement. Lescalleet Dep. 30:3-31:4, Dec. 13, 2012 [ECF No. 45-14]. Upon finding the container in a box of stored items, she removed it and disposed of the remaining contents of the box, including a second container of body powder, toothpaste and books. Mem. Op. 21-22, *Barlow v. Colgate-Palmolive Co., et al.,* Consolidated No. 24X11000783 (Cir. Ct. Balt. City Nov. 13, 2015) [ECF No. 45-4]. Mrs. Lescalleet also discarded the entire contents of a second, half-wet box, and she then turned the Cashmere Bouquet container over to her attorneys. *Id.*

In a written opinion finding that the plaintiffs had failed to properly authenticate the container, Judge Christopher Panos highlighted Mrs. Lescalleet's testimony regarding not only the reason she went searching through her basement – a water leak, or possibly questioning from her first deposition – but also the "peculiarity surrounding Mrs. Lescalleet's disposal of the boxes she found within her basement." *Id.* at 23-24. Judge Panos found that the totality of her varying testimony "seriously call[ed] into question the circumstances attendant to the purported discovery of the Lescalleet sample, as well [as] its authenticity." *Id.* at 23. Judge Panos underscored Mrs. Lescalleet's testimony regarding turning over the container to her attorney: "Well, I guess I was just thinking whether I wanted to give it to [her counsel] or not, because if he tested it and it didn't have any asbestos in it, then I wouldn't really have a case." *Id.* at 24.

As a result, Judge Panos stressed that "[t]he Court cannot overstate the significance of this statement as it seriously calls into question the motivation and credibility of Mrs. Lescalleet." *Id.* at 24-25. Finally, Judge Panos noted that Mrs. Lescalleet was not the individual who purchased the sample, that the "unscientific" circumstances of the sample's decades-long storage remained unclear, and that Colgate would suffer prejudice due to the spoliation of the other materials in the box before they could be tested for common contaminants. *Id.* at 24-27. Accordingly, the court excluded the sample and all "testing references arising therefrom." *Id.* at 31. [11]

v. Potential Contamination of the Vintage Cashmere Bouquet Containers

The record reflects two potential sources of contamination of the contents of the vintage containers: collectors who refill vintage talc containers with new talc for display, and asbestos from the ambient air. *See* Internet Forum Discussion [ECF No. 45-16]; Brody Dep. 140:17-141:5, May 7, 2013 [ECF No. 45-33]. With respect to the possibility of third parties refilling the vintage containers with different talc, Colgate presents the Court with an internet forum discussion that relates to vintage glass Old Spice talcum bottles won through an eBay auction, in which the purchaser states that he or she believes the containers will look nice refilled and displayed in his or her home but notes the difficulty of refilling the containers with talc and solicits help from other participants in the forum. Internet Forum Discussion [ECF No. 45-16].

Turning to ambient contamination, asbestos exists everywhere in normal background air. Brody Dep. 140:17-141:5. Colgate's own experts have written on the subject of asbestos in ambient air, analyzing "3978 indoor samples from 752 buildings, representing nearly 32 man-years of sampling" and publishing their findings. Lee, RJ, Van Orden, DR, *Airborne Asbestos in*

[11] Judge Panos's opinion was based on Maryland Rule 5-901, which is derived from Federal Rule of Evidence 901.

Buildings, Regul. Toxicol. Pharmacol., 50:218-25 (2008) [ECF No. 57-33]. Their study of buildings with known asbestos-containing materials did not find any anthophyllite and found very little tremolite in the ambient air. *Id.* at 222. The "median building" averaged zero asbestos fibers longer than 5 microns in ambient air. *Id.*

e. Analysis

i. Authenticity of Samples Purchased by Law Firms and Produced by Colgate

While an unbroken chain of custody is certainly one possible method to authenticate evidence, under the Court's review of the evidence in this case, the gaps in the chains of custody for these containers go to weight rather than admissibility. As stated above, the parties do not dispute that the vintage containers have talc in them, nor do they dispute that the containers themselves may be authentic. Thus, the dispute is limited to whether the containers have been refilled with different talc, or whether they contain Cashmere Bouquet, but in a contaminated form.

Taking all of the evidence into consideration, with respect to the containers purchased by law firms and produced by Colgate, the Court concludes that "as a matter of reasonable probability, possibilities of . . . adulteration have been eliminated." *Mitchell*, 816 F.3d at 872. The evidence before the Court does not establish a substantial risk that these containers were refilled with different talc. As explained above, the caps on the plastic bottles do not show any signs of trauma to indicate that they were somehow pried off to allow the containers to be refilled, and the intact diaphragms inside many of the round dusting powder containers suggest that those containers had not been tampered with either. The Court also finds that the general possibility that vintage talc container collectors have adulterated the contents of the containers is not sufficient to exclude Dr. Gordon's testing results for the contents of these containers. "While Defendant is free to speculate that some unknown individual with some unknown motive might

have tampered with the [evidence], such speculation is simply not a basis for removing—as a threshold issue—the matter from the consideration of the jury." *United States v. Tann*, 425 F. Supp. 2d 26, 36 (D.D.C. 2006).

The Court also finds that the possibility of ambient contamination also does not require exclusion of Dr. Gordon's testing results as to the contents of these containers. Colgate suggests that the talc in the vintage containers may have been contaminated by asbestos fibers from ambient air. But there is no evidence in the record suggesting that these containers were exposed to increased levels of background contamination.

As the Supreme Court has concluded "[t]he sum of an evidentiary presentation may well be greater than its constituent parts. . . . a piece of evidence, unreliable in isolation, may become quite probative when corroborated by other evidence." *Bourjaily v. United States*, 483 U.S. 171, 180 (1987). The Court finds that it was reasonable for Dr. Gordon to rely on the talc in the containers purchased by law firms and produced by Colgate as authentic and unaltered Cashmere Bouquet. If the evidence were "uncontradicted, a reasonable mind might—though not necessarily would—fairly conclude favorably to the fact of [authenticity]," *Tann*, 425 F. Supp. 2d at 36. Accordingly, Dr. Gordon's testimony and evidence related to his testing of the talc in these containers will not be excluded for lack of authenticity.

ii. Authenticity of the Samples Stored at Mount Sinai School of Medicine

The Court finds that Plaintiff has failed to establish that it was reasonable for Dr. Gordon to rely on the samples stored at the Mount Sinai School of Medicine as authentic and unaltered Cashmere Bouquet, so Dr. Gordon's testimony and evidence related to his testing of the contents of these containers will be excluded for lack of authenticity. The evidence in the record establishes that these samples were stored in an environment with other known asbestos-

containing materials. They were not shielded in any way from those other materials and were even kept in the same drawers. Plaintiff has not sufficiently eliminated the possibility of adulteration or contamination to a reasonable degree of probability, and these samples shall therefore be excluded.

iii. Authenticity of the Kristi Lescalleet Sample

The Court agrees with Judge Panos's findings in the Circuit Court for Baltimore City and finds that Plaintiff has failed to make the requisite showing of authenticity for the contents of the container discovered by Mrs. Lescalleet, so Dr. Gordon's testimony and evidence related to his testing of the contents of this container will be excluded for lack of authenticity. *See* Mem. Op. 21-22, *Barlow v. Colgate-Palmolive Co., et al.,* Consolidated No. 24X11000783 (Cir. Ct. Balt. City Nov. 13, 2015) [ECF No. 45-4]. Mrs. Lescalleet testified that she did not possess an original container of Cashmere Bouquet. *Id.* She then claimed to have discovered one container in her basement, but she disposed of additional nearby items that would shed light on the provenance of the container. *Id.* While the container may not show obvious evidence of tampering, Plaintiff cannot sufficiently negate the possibility of tampering or contamination in the face of what Judge Panos described as Mrs. Lescalleet's "serious" credibility issues. *Id.* Additionally, Plaintiff cannot overcome the prejudice to Colgate due to the spoliation of the additional contents of the box in which the container was located. For these reasons, the sample will be excluded.

IV. PLAINTIFF'S MOTION *IN LIMINE*

Plaintiff seeks to exclude from trial "any reference to or introduction of evidence regarding Dr. Gordon's alleged connection to organized crime, any alleged criminal past, involvement in witness protection, or any statements by Dr. Gordon concerning these matters."

Mot. at 7 [ECF No. 55]. Colgate did not oppose this motion; however, based on the Court's ruling on Colgate's *Daubert* Motion, the Court finds the motion is moot.

V. CONCLUSION

For the reasons set forth in this Memorandum Opinion, the Court grants Colgate's *Daubert* Motion [ECF No. 49]; grants in part and denies in part Colgate's Motion *in Limine* [ECF No. 45]; and finds as moot Plaintiff's Motion *in Limine* [ECF No. 55]. An appropriate order will accompany this Memorandum Opinion.

Thomas F. Hogan

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Date: 2019.08.06 16:19:36 -04'00'

August 6, 2019

Thomas F. Hogan
SENIOR UNITED STATES DISTRICT JUDGE