

No. 07-591

In the Supreme Court of the United States

LUIS E. MELENDEZ-DIAZ, PETITIONER

v.

COMMONWEALTH OF MASSACHUSETTS

*ON WRIT OF CERTIORARI TO THE
APPEALS COURT OF MASSACHUSETTS*

**BRIEF FOR THE UNITED STATES
AS AMICUS CURIAE SUPPORTING RESPONDENT**

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QUESTION PRESENTED

Whether a state laboratory's certificate indicating that items the police had submitted for chemical analysis contained cocaine constituted a testimonial statement within the meaning of the Confrontation Clause of the Sixth Amendment, under *Crawford v. Washington*, 541 U.S. 36 (2004).

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INTEREST OF THE UNITED STATES

This case presents the question whether a certificate issued by a state laboratory indicating that certain substances, submitted to the laboratory by the police for chemical analysis, had been determined to contain cocaine is a “testimonial” statement within the meaning of the Confrontation Clause of the Sixth Amendment, under *Crawford v. Washington*, 541 U.S. 36 (2004). Because that question has substantial implications for the conduct of federal criminal trials involving scientific evidence, the United States has a significant interest in the Court’s disposition of this case.

STATEMENT

1. On November 15, 2001, a loss prevention manager at a Boston K-Mart store reported to Detective Robert Pieroway that store employee Thomas Wright was acting suspiciously. After Wright received afternoon telephone calls, he would meet a blue car outside the store, depart briefly in the car, and then return to the store. 9/10/04 Tr. 26-30.

That afternoon, Pieroway parked in front of the store in an unmarked van. Pieroway observed Wright exit the store and enter the back seat of the blue car. Petitioner was in the front passenger seat and Ellis Montero was the driver. As the car moved slowly through the parking lot, Wright leaned forward between petitioner and Montero. Wright then exited the car and returned to the store. Pieroway approached Wright, searched him, and recovered four plastic bags of cocaine, each worth \$80 to \$100, from Wright's pants pocket. J.A. 20, 25-26; 9/10/04 Tr. 60-70, 73-74.

At Pieroway's instruction, two patrol officers stopped the blue car and arrested petitioner and Montero. Petitioner, Montero, and Wright were handcuffed and transported to the police station in the back seat of one police car. Petitioner and Montero moved around and spoke in Spanish during the trip. After the three arrestees exited the car at the police station, an officer recovered 19 plastic bags of cocaine from the back-seat floor of the cruiser and \$320 cash from the ground outside the cruiser. J.A. 36-38; 9/10/04 Tr. 72-73, 144-157, 163-166.

2. Petitioner and Montero were charged by indictment with distributing cocaine and trafficking in 14 grams or more of cocaine. They were tried together before a jury. Pet. App. 1a.

a. A Massachusetts statute requires the state Department of Public Health to chemically analyze substances submitted to it by the police if the analysis will be used for the enforcement of law. Mass. Gen. Laws ch. 111, § 12 (LexisNexis 2004). A separate statute requires the analyst, upon request, to “furnish a signed certificate, on oath, of the result of the analysis * * * to any police officer” and provides that the certificate “shall be prima facie evidence of the composition, quality, and the net weight” of the substance tested. *Id.* § 13.

b. At trial, Detective Pieroway testified that the bags of cocaine recovered from Wright and from the cruiser were analyzed at a state laboratory. Pieroway identified three exhibits as the certificates of analysis created by the laboratory in connection with those drug analyses. The prosecutor moved to admit the certificates. Petitioner’s counsel objected, citing *Crawford v. Washington, supra*. The court admitted the notarized certificates over petitioner’s objection. The certificates indicated that on November 28, 2001, the contents of the four bags recovered from Wright and the 19 bags recovered from the police cruiser were analyzed at the state laboratory and were found to contain cocaine. The certificates reflected the net weight of the cocaine and bore signatures of the laboratory employees who conducted the tests. J.A. 27-31; Pet. App. 24a-29a.

c. Petitioner’s defense at trial was that the government failed to prove that a drug transfer occurred in the blue car and failed to prove who left the drugs inside the police cruiser. In closing argument, petitioner’s counsel told the jury that the government’s evidence of distribution consisted solely of a police officer’s testimony “that he sees three people in the car, one guy gets in the car, he leans forward. That’s it. He leans forward. Certain-

ly that doesn't tell you anything." J.A. 44. With respect to the drugs found in the police car, petitioner's counsel argued:

[T]he amount of drugs isn't in question. What is in question is who possessed those drugs. Who do you think possessed those drugs? * * * [A]sk yourself, is it Mr. Wright who has the drugs? Is it Mr. Melendez-Diaz who has the drugs? * * * [B]eing in the same room with someone who has drugs is not possessing those drugs.

J.A. 47-48. The jury returned guilty verdicts on all counts. Pet. App. 1a.

3. The Appeals Court of Massachusetts affirmed and the Supreme Judicial Court of Massachusetts denied review. Pet. App. 1a-10a, 11a. The Appeals Court rejected petitioner's argument that admission of the certificates of analysis violated the Confrontation Clause as it was interpreted in *Crawford*. *Id.* at 8a n.3. The court relied (*ibid.*) on the decision of the Supreme Judicial Court of Massachusetts in *Commonwealth v. Verde*, 827 N.E.2d 701 (Mass. 2005).

In *Verde*, the court held that certificates of analysis "are well within the public records exception to the confrontation clause" and therefore are not "testimonial" evidence under *Crawford*. Pet. App. 18a. The court noted that certificates of analysis "merely state the results of a well-recognized scientific test determining the composition and quantity of the substance" and do not require the public officer analyzing the substance to exercise discretion or form an opinion. *Id.* at 17a. The court also noted that a certificate is admissible by statute "only as prima facie evidence of the composition, quality, and weight of the substance" and could be re-

butted by any defendant who “doubts its correctness.” *Id.* at 17a-18a. The court further observed that the admission of a certificate of analysis does not implicate “the principal evil at which the Confrontation Clause was directed[,] . . . particularly its use of *ex parte* examinations as evidence against the accused.” *Id.* at 18a (quoting *Crawford*, 541 U.S. at 50).

SUMMARY OF ARGUMENT

The certificates of analysis at issue in this case, which attested to the identity and weight of substances submitted to a state laboratory for examination, are not “testimonial” statements under the Confrontation Clause.

I. This Court’s line of cases beginning with *Crawford v. Washington*, 541 U.S. 36 (2004), does not resolve the issue in this case, because those cases addressed witness statements analogous to the paradigmatic *ex parte* statements at which the Confrontation Clause was aimed. Scientific evidence generated by laboratory instruments did not exist at the time of the framing, however, and it raises significantly different issues.

II. The common law recognized that official records generated by public officers did not generally require in-person testimony and confrontation to be admissible. Those records, which reflected the observations of public officers made in the course of their duties, were admissible absent a showing of falsity or a personal interest on the part of the public officer. While the official records exception, of course, cannot cover witness statements produced in a police investigation, it does apply to certificates of analysis prepared by public officials charged with a responsibility to conduct chemical analyses and report the results. Experience confirms that

testing results may either exonerate or inculcate a defendant. Certificates reporting those results may be received in evidence as official records, subject to the defendant's right to subpoena witnesses to impeach the results.

III. Even if the official records doctrine were held inapplicable, the certificates of analysis admitted in this case do not contain testimonial statements. The certificates consist of two components: (1) the results of chemical analysis of particular substances, as revealed by laboratory instruments; and (2) the certification by a laboratory employee of those instrument-generated results. Neither component is testimonial. Laboratory instruments are not human beings and thus are not "witnesses" within the meaning of the Confrontation Clause. And the instrument operators' certification of those instrument-generated results is akin to the sort of routine authentication of non-testimonial records that has long been exempt from cross-examination requirements. Just as the raw data produced by an instrument is non-testimonial, the instrument operator's essentially verbatim report of that raw data is also not testimonial.

Sound reasons counsel against straining to treat routine chemical-analysis reports as though they were the modern-day fruits of a Marian examination. Defendants frequently have no interest in cross-examining a laboratory employee about a routine report (which reflects the indisputable output of a laboratory instrument). But defendants may secure a strategic advantage by forcing the government to call the witness on the chance that he cannot be located. Moreover, the exercise—particularly for prosecution offices with numerous cases relying on routine, instrument-generated laboratory results and the laboratories that must conduct the tests—consumes

scarce criminal justice resources, with little or no countervailing benefit to the truthseeking process.

IV. Finally, even if the presentation of scientific test results through the certificates of analysis in this case were held impermissible, such a holding should not be understood to cast doubt on other procedures that foster efficiency while safeguarding any applicable cross-examination rights. These include the use of a testifying expert to provide opinion testimony concerning the results of scientific testing conducted by others and notice-and-demand statutes that afford an opportunity for cross-examination if the defendant makes a timely demand.

ARGUMENT

THE ADMISSION OF THE CERTIFICATES OF ANALYSIS AT ISSUE IN THIS CASE DID NOT VIOLATE THE CONFRONTATION CLAUSE

The Confrontation Clause of the Sixth Amendment provides that “[i]n all criminal prosecutions, the accused shall enjoy the right * * * to be confronted with the witnesses against him.” U.S. Const. Amend. VI. The certificates of analysis at issue here, which were prepared by a state laboratory performing scientific tests as required by law, do not fit within the category of “testimonial” statements covered by the Clause under *Crawford v. Washington*, 541 U.S. 36 (2004). The decision below should therefore be affirmed.

I. Scientific Analysis Of Evidence By State Laboratories Raises Issues Not Resolved By *Crawford*

In *Crawford*, this Court held that the Confrontation Clause prohibits the introduction of testimonial hearsay statements of an absent witness at a criminal trial unless the witness is unavailable and the defendant had a prior

opportunity to cross-examine the witness. The Court did not provide a comprehensive definition of the term “testimonial statement” but it noted that it “applies at a minimum to prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and to police interrogations.” 541 U.S. at 68-69. In *Davis v. Washington*, 547 U.S. 813, 824 (2006), the Court made clear that testimonial hearsay “mark[s] out not merely [the] ‘core[.]’ [of the Confrontation Clause,] but its perimeter.”

Until now, the Court has applied the “testimonial statement” standard it announced in *Crawford* only to statements made to police officers by eyewitnesses to alleged criminal conduct.¹ With the exception of the emergency circumstances presented in *Davis*, which the Court held did *not* generate testimonial statements, the scenarios closely resembled the civil-law practice that was the “principal evil” that the Confrontation Clause was intended to curtail: the admission into evidence of the *ex parte* examination of a witness to criminal conduct conducted by a government investigator (formerly mag-

¹ In *Crawford* itself, the Court held that the Confrontation Clause was violated by the admission at trial of a woman’s tape-recorded statements made during a custodial police interrogation describing a stabbing committed by her husband, the defendant. 541 U.S. at 38, 68-69. In *Davis*, the Court held that a recorded 911 call in which a woman described her former boyfriend’s ongoing assault upon her and sought emergency help from the police was not testimonial and, thus, its admission did not violate the Confrontation Clause. 547 U.S. at 827-828. In the consolidated case of *Hammon v. Indiana*, No. 05-5705, the Court held that the Confrontation Clause *was* violated by the admission of a second woman’s oral statements to a police officer in her home describing an assault that her husband had committed upon her earlier, where no emergency existed when the statements were made and the objective primary purpose of the officer’s interrogation was to investigate potentially criminal past events. *Id.* at 829-830.

istrates, but now primarily police officers) without providing the accused person the opportunity to cross-examine the witness. See 541 U.S. at 50.

Unlike *Crawford* and *Davis*, this case does not involve the admission of an out-of-court statement by a witness to criminal conduct or police questioning. The witnesses to petitioner's criminal conduct were the police officers who observed petitioner's encounter with Wright and the events surrounding the post-arrest transport of petitioner, Wright, and Montero. Those witnesses all testified at trial and were cross-examined. The Confrontation Clause issue here instead involves the results of scientific tests conducted on evidence collected by the police in a criminal investigation.

Founding-era history does not provide a direct answer to the question whether the result of a scientific test on evidence collected in a criminal investigation is testimonial hearsay covered by the Confrontation Clause because the Founders were not familiar with such evidence. Forensic science—"the application of the natural and physical sciences to the resolution of conflicts within a legal context," 4 David L. Faigman et al., *Modern Scientific Evidence*, § 29:2 (2007)—is, in all respects implicated here, a post-founding phenomenon. The 1752 English trial of Mary Blandy for the murder-by-poisoning of her father included testimony concerning rudimentary observational tests a doctor performed to conclude that a powder that the defendant discarded was arsenic, and that case may be the first criminal trial to employ forensic evidence of that type. *The Trial of Mary Blandy*, 18 How. St. Tr. 1117, 1139-1140. But the foundational discoveries of modern forensic science, and thus the factual basis for the issue now before the Court,

came much later.² The drafters of the Confrontation Clause could not have anticipated that two centuries later, millions of DNA profiles would be contained in a national database, FBI, U.S. Dep't of Justice, *Pub. No. 0357, FBI Laboratory 2005 Report 32 (2005 FBI Laboratory Report)* (visited Sept. 9, 2008) <<http://www.fbi.gov/hq/lab/labannual05.pdf>>, or that toxicologists would identify controlled substances using instruments capable of separating and identifying the substances' molecular components, see 2 Paul C. Giannelli & Edward J. Imwinkelried, *Scientific Evidence* 488-494, 525-533 (4th ed. 2007) (*Scientific Evidence*) (describing gas chromatography and mass spectrometry techniques for drug identification).

Because *Crawford* dealt with evidence that was generated in ways that had “a striking resemblance to examinations of justices of the peace in England” under the Marian bail and committal statutes, see 541 U.S. at 52, the Court did not have to venture an opinion about how the Confrontation Clause should apply to the far different evidence that results from laboratory testing. The resolution of that issue should turn not on petitioner's unpersuasive analogy of laboratory reports to witness affidavits, Pet. Br. 16-17, but rather on the textual, historical, and practical considerations relevant to

² For instance, it was not until the second half of the 19th century that scientists would understand that fingerprints do not change over time and thus could be used as a method of identification for law-enforcement and other purposes. See William J. Herschel, *The Origin of Finger-Printing* 22-31 (1916). The Federal Bureau of Investigation (FBI) had no laboratory until 1932. Kim Waggoner, *The FBI Laboratory: 75 Years of Forensic Science Service* 1-2 (75 Years) <http://www.fbi.gov/hq/lab/fsc/backissu/oct2007/research/2007_10_research01_test1.htm>. It was only 20 years ago that the FBI Laboratory conducted its first DNA analysis on evidence. *Ibid.*

evidence generated by laboratory employees utilizing scientific instruments.

II. The Certificates of Analysis In This Case Fit Within The Official Records Exception

The certificates of analysis admitted in this case represent official records generated and used as provided by law. As respondent explains (Massachusetts Br. 36-45), the common law recognized official records as an exception to the requirements of in-person testimony and confrontation. The official records exception permitted the admission of “official registers or records kept by persons in public office in which they [were] required, either by statute or by the nature of their office, to write down particular transactions occurring in the course of their public duties or under their personal observation.” *Evanston v. Gunn*, 99 U.S. 660, 666 (1878) (citations omitted). The official records exception is rooted in a “presumption that public officers do their duty.” 5 John Henry Wigmore, *Evidence in Trials at Common Law* § 1632, at 618 (James H. Chadbourn rev. ed. 1974) (Wigmore). “The fundamental circumstance is that an official duty exists to make an accurate statement, and that this special and weighty duty will usually suffice as a motive to incite the officer to its fulfillment.” *Ibid.* Accord Thomas Starkie, *A Practical Treatise of the Law of Evidence* 273 (Dowdeswell & Malcolm eds., 10th Am. ed. 1876).

The official records exception was applied at common law to admit records created pursuant to a public duty, including in criminal proceedings where those records proved a fact essential to the government’s case. See *The King v. Aickles*, 168 Eng. Rep. 297, 297-298 (1785) (in proceeding to reinstate conviction and sentence

based on violation of condition of pardon that prisoner remain exiled in America for seven years, and where it was “incumbent on the prosecutor to prove the precise day on which the prisoner was discharged,” prison records admitted showing names of prisoners brought into the prison and time of their discharge). Official records could be excluded based on evidence that the records were falsified or that the public officer had a personal interest in the matter being recorded. *Id.* at 298 (noting that “[a]ny person may undoubtedly falsify the entries if they can; but unless the truth of the entry as to the present fact can be impeached, it is admissible evidence”); 5 Wigmore § 1633, at 624 (“in a given case, circumstances may justify the exclusion of an official statement where a strong motive to misrepresent appears to have existed”). But the foreseeable use of the record in litigation was not identified as an independent ground for exclusion. For instance, the exception at common law encompassed “inquisitions” conducted under express public authority relating to matters of public interest, such as “*post mortem*” inquisitions to determine the heirs and estate of a deceased person. *Id.* § 1670, at 793. It is foreseeable that those reports would be pertinent to litigation, but they were “always received and highly valued.” *Ibid.* The common law exception for official records also included “certificates” that were “given out by [the public official] to an applicant for the latter’s use,” so long as there was “*express authority*” to issue the certificate. *Id.* §§ 1636, 1674, at 646, 823. The particular use to which the “applicant” would put the certificate was not dispositive; the applicability of the exception instead focused on the authority granted to the public officer.

Of course, the public records exception cannot be used to admit hearsay witness statements gathered in a police investigation (as took place in *Crawford* itself). But the certificates of analysis admitted in this case do not reflect hearsay statements of ordinary witnesses who observed criminal activity. Rather, they conform to the common law exception for official records because state laboratory employees are public officers who have a statutory duty to record and report information generated from their own tests. See Mass. Gen. Laws ch. 111, § 12 (requiring chemical analysis of substances submitted by the police if the analysis will be used for the enforcement of law); *id.* § 13 (requiring provision of signed certificate, under oath, of the analytical results). Those public officers have an official duty to conduct and report their analyses accurately, and “[i]t [was] the influence of the official duty, broadly considered, which [was] taken as the sufficient element of trustworthiness” at common law. 5 Wigmore § 1632, at 618. The laboratory employees as a group have no personal interest in the outcome of the analyses that would disqualify their reports as official records. As one indication, in 2007 a total of 2650 drug evidence exhibits analyzed by the Drug Enforcement Administration laboratory yielded results that showed either no drug at all or identified a drug that was not a controlled substance. In other words, the results were exculpatory. Accordingly, as the *Verde* court held, certificates of analysis “are well within the public [or official] records exception to the confrontation clause,” Pet. App. 18a, subject, of course, to the

defendant's right to subpoena witnesses to impeach their results.³

III. The Certificates Of Analysis In This Case Reflect The Output Of A Scientific Instrument, As Attested To By The Instrument's Operator, And Are Therefore Not Testimonial

Even if the official records doctrine did not take the certificates of analysis in this case outside the coverage of the Confrontation Clause, the certificates at issue still do not contain “testimonial statements” under *Crawford*. The certificates state that the substances submitted by the police “[h]a[d] been examined” with the result that “[t]he substance[s] w[ere] found to contain” cocaine, with specified net weights. Pet. App. 24a-29a. The certificates thus embody (a) the results of chemical analysis by laboratory testing, and (b) the report on those results

³ Accord *Smith v. Mott*, 100 So. 2d 173, 174-176 (Fla. 1958) (report of alcoholic content of blood issued by state department of health was admissible as official record); *Commonwealth v. Slavski*, 140 N.E. 465, 468-469 (Mass. 1923) (certificates of state department of health offered to prove alcoholic content of substance were admissible as official records); *Bracey v. Commonwealth*, 89 S.E. 144, 144-145 (Va. 1916) (same); *State v. Torello*, 131 A. 429, 429-431 (Conn. 1925) (same). In addition, after *Crawford*, courts have widely and correctly held that regularly-kept maintenance records relating to laboratory instruments, which are prepared on a scheduled basis established by statute or regulation and which must be prepared without regard to whether the instrument has been utilized or whether the record will be used in litigation, or certificates attesting to the fact that a machine was tested and found to be in working order, are business records, official records, or their equivalents and do not contain “testimonial statements” subject to the Confrontation Clause. See, e.g., *Rackoff v. State*, 637 S.E.2d 706, 709 (Ga. 2006); *Bohsancurt v. Eisenberg*, 129 P.3d 471, 474-480 (Ariz. Ct. App. 2006). See generally *Palmer v. Hoffman*, 318 U.S. 109, 115 (1943).

by laboratory employees. Neither of those categories of information, on this record, should be held to constitute a testimonial statement.

A. Laboratory Instruments Do Not Produce Testimonial Statements

1. In *Crawford*, the Court held that the term “witnesses” in the Confrontation Clause refers to those who “bear testimony.” 541 U.S. at 51 (quoting 2 Noah Webster, *An American Dictionary of the English Language* 114 (1828) (Webster)). “Testimony,” the Court explained, is typically “[a] solemn declaration or affirmation made for the purpose of establishing or proving some fact.” *Ibid.* (quoting Webster 91). The same dictionary relied on by the Court in *Crawford* defines “solemn” as “affecting with seriousness; impressing or adapted to impress seriousness.” Webster 75. Solemnity and seriousness are human traits. The “witnesses” to whom the Confrontation Clause refers, therefore, must be “human witnesses.” *United States v. Lamons*, 532 F.3d 1251, 1263 (11th Cir. 2008). That conclusion is reinforced by Federal Rule of Evidence 801(a), which defines a “statement” for hearsay purposes as an oral or written assertion or nonverbal conduct of a *person* if it is intended by the *person* as an assertion. See *United States v. Washington*, 498 F.3d 225, 230 & n.1 (4th Cir. 2007) (finding definition of “statement” in Rule 801(a) to be “uncontroversial” for Confrontation Clause purposes in light of reference in Sixth Amendment to “right to confront (human) ‘witnesses’”), petition for cert. pending, No. 07-8291 (filed Dec. 14, 2007). Petitioner does not dispute that a “witness” for Confrontation Clause purposes is “a *person* who gives testimony.” Pet. Br. 13

(emphasis added). And, of course, a machine is not a person.

2. The distinction between human witnesses, the sole concern of the Confrontation Clause, and laboratory instruments, which also can produce information introduced as evidence in a criminal trial but which fall outside the textual scope of the Confrontation Clause, is critical to this case. Testing results that contain no human assertion are not “statements” at all, and therefore cannot be “testimonial statements” for Confrontation Clause purposes. See, e.g., *Wimbish v. Commonwealth*, 658 S.E.2d 715, 719-720 (Va. Ct. App. 2008) (breath-test result generated by a machine was not a statement made by a witness); *State v. Weber*, 19 P.3d 378, 381 (Or. Ct. App. 2001) (photo radar instruction setting forth speed of vehicle was not hearsay because it was generated by a machine and was not an assertion by a person); *Stevenson v. State*, 920 S.W.2d 342, 343 (Tex. Ct. App. 1996) (intoxilyzer printout was not hearsay because it was self-generated by the instrument, which is not a declarant).

A person’s *interpretation* of ambiguous test results or his *application of judgment* to instrument-generated data raises different questions. But where the role of the person is limited to turning on the instrument, supplying the material to be tested, and reading the result that the instrument has produced, the answer provided by the instrument contains no assertion by the human operator and is not a “statement.” This is plainly true of machine-generated results such as a photograph taken by a red-light camera. It is equally true of more sophisticated results, such as a chromatogram or mass spectrum generated by a gas chromatograph/mass spectrometer instrument used for drug identification. See *Lamons*, 532 F.3d at 1263-1264 & n.23 (phone-bill data auto-

matically recorded onto data reel were not statements of persons; “certain statements involve so little intervention by humans in their generation as to leave no doubt that they are wholly machine-generated for all practical purposes”); see generally *Scientific Evidence* 488-492, 525-530 (depicting and describing chromatogram and mass spectrum and noting that a computer equipped with a library of the mass spectra of known compounds can automatically interpret the spectrum of the unknown substance by comparing it to the library of known spectra). An instrument that issues its own self-evident report is not a “witness” for Confrontation Clause purposes. Accordingly, the direct results of instrument-based testing in the laboratory are not testimonial statements under the Confrontation Clause.⁴

⁴ See *Washington*, 498 F.3d at 229-230 (raw data generated by gas chromatograph used to detect alcohol in blood sample are “‘statements’ of the machines themselves, not their operators” and are not subject to the Confrontation Clause); *United States v. Moon*, 512 F.3d 359, 362 (7th Cir. 2008) (instrument readouts from infrared spectrometer and gas chromatograph used to identify cocaine “are not ‘statements’ in any useful sense”), petition for cert. pending, Nos. 07-1251, 07-10255 (filed Apr. 2, 2008); *State v. Chun*, 943 A.2d 114, 169-170 (N.J. 2008) (Alcohol Influence Report generated automatically by Alcotest machine was not testimonial because, *inter alia*, the operator could not influence the machine’s report and the machine could have no intent to advance a prosecution; court also observed that “[s]urely the Founding Fathers did not envision the day when a device that cannot itself be cross-examined would be the equivalent of a witness”), petition for cert. pending, No. 07-1562 (filed June 13, 2008); cf. *United States v. Hamilton*, 413 F.3d 1138, 1142-1143 (10th Cir. 2005) (“header” information generated automatically by computer upon uploading of pornographic image to newsgroup involved neither a “statement” nor a “declarant” and was not hearsay).

B. The Operators Of Laboratory Instruments May Attest To The Instruments' Proper Operation And Test Results Without Generating Testimonial Statements

If the Commonwealth in this case had introduced into evidence the raw data produced by a laboratory instrument, that evidence would not have constituted a testimonial statement, for the reasons described above. The constitutional analysis does not change simply because state law allows the results of the same examination to be introduced through a laboratory employee's certificate or because the certificate is prepared for use in a criminal case. Documents that simply authenticate records that are not themselves testimonial, or that transmit data evident from such non-testimonial records, are non-testimonial statements for purposes of the Confrontation Clause.

1. This Court's cases establish the principle that an authentication certificate prepared for a legal proceeding does not, by itself, automatically constitute a testimonial statement. In *Davis*, the Court identified *Dowdell v. United States*, 221 U.S. 325 (1911), as an example of an early American case that did not involve "testimonial" statements of "witnesses" under the Confrontation Clause. 547 U.S. at 825. In *Dowdell*, the Supreme Court of the Philippine Islands had supplemented the trial record in a criminal case with certificates from the clerk of court, the trial judge, and the court reporter indicating that their records showed that the defendants had entered not-guilty pleas and had been present at trial. The *Dowdell* Court rejected the defendants' claim that use of the certificates violated the Confrontation Clause and an equivalent provision of a federal statute that contained a "Philippine Bill of Rights." The Court explained that the "general rule of law embodied" in the

Confrontation Clause “ha[d] always had certain well recognized exceptions,” one of which was the principle that “[d]ocumentary evidence to establish collateral facts, admissible under the common law, may be admitted in evidence.” 221 U.S. at 329-330. The Court held that the court officials who executed the certificates in *Dowdell* “were not witnesses against the accused” within the meaning of the Confrontation Clause because they “were not asked to testify to facts concerning [the defendants’] guilt or innocence.” *Id.* at 330. *Dowdell* establishes that the fact that certificates are prepared in lieu of testimony for use at trial (or, in that case, to supplement the record of the trial) does not mean that those statements are “testimonial” ones subject to the Confrontation Clause.

Similarly, certificates of authenticity and “certificates of nonexistence of record” (CNRs) are certificates prepared for the sole purpose of being introduced at trial. But at common law, a certificate attesting that a document was a true copy of an original found among the public records where such documents were kept was admissible as evidence of the existence and authenticity of the public record. See Fed. R. Evid. 902(4), advisory committee’s note (“The common law * * * recognized the procedure of authenticating copies of public records by certificate.”); 5 Wigmore § 1678, at 863. Cross-examination of the author of the certificate was not required. Where the underlying public and business records in such cases were nontestimonial, the certificate authenticating them was also “nontestimonial” hearsay exempt from the Confrontation Clause, even though it clearly was generated to prove a fact in a particular case. See, e.g., *United States v. Adefehinti*, 510 F.3d 319, 327-328 (D.C. Cir. 2008) (certificates authenticating bank re-

ords were not testimonial); *United States v. Ellis*, 460 F.3d 920, 927 (7th Cir. 2006) (certificate authenticating hospital records “is nontestimonial just as the underlying business records are”). CNRs, which certify that a record that would be kept in the course of an organization’s regularly conducted activities did not exist in the entity’s files, have also been admitted based on similar logic. The underlying principle is that, where a class of records is non-testimonial, a certificate reflecting the contents of those records, or the absence of a record from those contents, is no more testimonial than the records themselves. See *United States v. Urqhart*, 469 F.3d 745, 748 (8th Cir. 2006); *United States v. Cervantes-Flores*, 421 F.3d 825, 830-834 (9th Cir.), cert. denied, 547 U.S. 1114 (2005); *United States v. Rueda-Rivera*, 396 F.3d 678, 680 (5th Cir. 2005).

2. That principle applies in this context as well. The operator of a laboratory instrument who merely attests to its output does not add testimonial content to the underlying data. Rather, he effectively functions as a reporter, relaying the nontestimonial instrument-generated results to a court. Just as a representative of an entity may certify the existence and authenticity of the entity’s non-testimonial records, a laboratory employee may certify the existence and authenticity of a laboratory instrument’s results. In neither context does the individual performing the authentication function generate “testimonial” statements. Instead, that individual produces a non-testimonial certificate that permits the admission of underlying non-testimonial information.

As in *Dowdell* and the authentication and CNR contexts discussed above, the Confrontation Clause does not treat such laboratory certificates as “testimonial” statements. Indeed, courts in the United States have

long allowed certificates in criminal cases to prove similar facts that are ascertainable without the exercise of discretion or judgment by the certifying public officer. See, e.g., *T’Kach v. United States*, 242 F.2d 937, 937-938 (5th Cir. 1957) (in prosecution for impersonating a federal officer or employee, affidavit of personnel officer and custodian of records of White House stating that no record showed that the defendant was employed as a personal representative of the President was admitted and did not violate Confrontation Clause); *Bracey v. Commonwealth*, 89 S.E. 144, 144-145 (Va. 1916) (in prosecution for selling ardent spirits without a license, admission of certificate of state chemist showing analysis of beverage sold by the defendant did not violate confrontation rights); *United States v. Benner*, 24 F. Cas. 1084, 1085 (C.C.E.D. Pa. 1830) (No. 14,568) (in prosecution for arresting and imprisoning a foreign minister, certificate of Secretary of State indicating that the victim was an attache to the legation of Denmark properly admitted to show victim’s status).

C. Admission Of The Certificates Of Analysis In This Case Did Not Violate The Confrontation Clause

Applying those principles here, the admission of the certificates of analysis in this case was constitutional. Although the certificates were prepared for trial in the course of a police investigation, the record does not demonstrate that they contained “testimonial statements.”

1. As petitioner acknowledges (Br. 7), each certificate of analysis conveyed only that a substance provided to the laboratory by a police officer (1) was “examined,” (2) “was found to contain” cocaine, and (3) had an identified net weight. Pet. App. 24a-29a. Nothing in the certificates indicates that they represent more than (1) the

result generated by a scientific instrument designed to chemically analyze a substance and determine its weight; and (2) a laboratory employee's report of those instrument-generated results. For the reasons discussed above, the "statement" of a laboratory instrument that a substance contained cocaine of a particular weight is not testimonial. And the fact that the information is conveyed by a laboratory employee's certificate, rather than a print-out or screen-shot of the instrument's direct output, does not change the Confrontation Clause analysis.⁵

2. The record in this case contains no information about the "examination" that was conducted on the controlled substances. The record does not reveal whether the examination was performed entirely by an instrument, by a person applying substantial judgment to otherwise-unintelligible raw data, or some combination of the two. In *Verde*, the court concluded that equivalent certificates of analysis executed under Massachusetts law were not "testimonial statements" subject to the Confrontation Clause because they "are neither discretionary nor based on opinion" and "merely state the results of a well-recognized scientific test determining the composition and quantity of the substance." Pet. App. 17a. To the extent that the record permits *any* inference about the nature of the information contained

⁵ The certificate's report of drug weight illustrates the point. A digital scale may provide a reading of the weight of a substance that requires no human interpretation to understand. If a scale were equipped with a printer, the printed record of the item's weight would not be a testimonial statement; it would be the "statement" only of an instrument, the digital scale. Nothing in the constitutional analysis should change simply because a human laboratory employee reports the same instrument-generated result in the form of a certificate.

in the certificates of analysis admitted in this case, the inference is, as *Verde* suggests, that the “examination” documented in the certificates produced an instrument-generated result, with a human authenticator. And if the information contained in the certificates of analysis are not testimonial statements of witnesses, the mere use of the certificates as vehicles for conveying that information to the jury does not change the character of the evidence under the Confrontation Clause. Thus, the certificates cannot be described as “testimonial statements” of “witnesses” for Confrontation Clause purposes.

Petitioner now challenges (Br. 12) the “Massachusetts’ courts’ supposition that forensic reports are purely objective” and contends that “[s]uch reports reflect complicated, subjective interpretations of imprecise scientific tests.” That challenge comes far too late. Petitioner never challenged the reliability of the test results in the trial court, as he could have. He did not even argue to the jury that the certificates of analysis were of no meaning without information concerning the type of tests that were performed and their reliability. He did the opposite and conceded that the *prima facie* showing of the drugs’ identity and weight reflected in the certificates was proof beyond a reasonable doubt: “[T]he amount of drugs isn’t in question.” J.A. 47. In addition, while petitioner now asserts (Br. 32) that “there are at least *seventeen different methods* currently used for analyzing seized substances for the presence of drugs,” he cites nothing to indicate that the method used in this case generated a “testimonial statement” of a human “witness” within the meaning of the Confrontation Clause. He cannot challenge the admissibility of the certificates of analysis based only on speculation that

they contain underlying human judgment applied to readings produced by a laboratory instrument.

3. A holding that would bar certificates attesting to routine drug-testing results obtained directly from laboratory instruments would inflict serious harms to important public interests in criminal prosecutions, without producing offsetting benefits. In federal and District of Columbia cases, for instance, the Drug Enforcement Administration analyzed 52,948 controlled substance exhibits in fiscal year 2007.⁶ In the government's experience, most defendants do not challenge through cross-examination the determination of the substance involved or its laboratory-determined weight. An inflexible Confrontation Clause requirement to produce the laboratory employee who operated the instrument would impose significant resource costs on the government, with little benefit to defendants (who would often choose not to cross-examine or would simply stipulate to the relevant facts once the laboratory employee has appeared in court).

In other contexts, a requirement to produce the person who conducted a test might foreclose prosecution altogether. Forensic testing frequently produces data whose evidentiary value may emerge only years later. See, *e.g.*, *75 Years*, *supra* note 2, at 1 (describing five-year time lapse between discovery of bodies of three teenage murder victims in Spotsylvania County, Virginia, and initial DNA tests and the closure of the case through additional scientific testing when the suspect attempted to abduct another teenager). At that time, the particular laboratory employee may be entirely unavail-

⁶ See DEA, *Laboratories* (visited Sept. 9, 2008) <<http://www.usdoj.gov/dea/programs/laboratories.htm>>.

able. And retesting may be impossible (*e.g.*, because the testing process consumed the available biological or other material). If the death or unavailability years later of the operator of a laboratory instrument rendered the instrument-generated result inadmissible, the truth-seeking process would be frustrated—even though the defendant would have had little or no cross-examination for a live witness had one appeared. The Confrontation Clause does not require that result.

IV. The Confrontation Clause Does Not Mandate Automatic Production In Court Of All Participants In The Process Of Scientific Testing

Even if the Court were to conclude that presentation of scientific test results through the certificates of analysis in this case violated the Confrontation Clause, it should leave room for other procedures that foster efficiency while safeguarding any applicable cross-examination rights. These include the use of a testifying expert to provide an opinion concerning the results of scientific testing conducted by others and notice-and-demand statutes that afford an opportunity for cross-examination if the defendant indicates that he desires it.

A. The Confrontation Clause Permits Expert Opinion Testimony To Be Based On The Records Of Scientific Tests Conducted By Others

1. Federal Rule of Evidence 703 provides that an expert witness may base an opinion or inference on facts or data “perceived by or made known to the expert at or before the hearing.” The facts or data on which the expert relies “need not be admissible in evidence in order for the opinion or inference to be admitted” if they are “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the

subject.” Fed. R. Evid. 703. The goal of Rule 703 is to “bring the judicial practice [regarding expert testimony] into line with the practice of the experts themselves when not in court.” Fed. R. Evid. 703 advisory committee’s note to 1972 Proposed Rules. In other words, an expert should be able to base the opinion he or she offers in the courtroom on the same facts or data that he or she would rely upon in other professional settings, so long as that reliance is reasonable. *Ibid.*

Because of the prejudice that could result from exposing the jury to inadmissible evidence, Rule 703 instructs courts not to permit disclosure of otherwise inadmissible facts or data relied upon by an expert witness “unless the court determines that their probative value in assisting the jury to evaluate the expert’s opinion substantially outweighs their prejudicial effect.” Fed. R. Evid. 703; see also Fed. R. Evid. 705 (providing that an expert may testify to an opinion without first testifying to the underlying facts or data). When otherwise inadmissible facts or data underlying an expert’s opinion are disclosed to the jury under Rule 703, they are admitted for the limited purpose of assisting the jury to decide what weight, if any, to give the expert’s opinion and may not be considered by the jury as substantive evidence.⁷

2. *Crawford* “did not involve expert witness testimony and thus did not alter an expert witness’s ability to rely on (without repeating to the jury) otherwise inad-

⁷ See Fed. R. Evid. 703 advisory committee’s notes to 2000 Amendments (noting also that appropriate limiting instruction must be given by the court upon request); see also *Wilson v. Merrell Dow Pharms. Inc.*, 893 F.2d 1149, 1153 (10th Cir. 1990) (applying rule of limited admissibility before 2000 amendment to Rule 703); *United States v. Dukagjini*, 326 F.3d 45, 58 (2d Cir. 2003) (citing cases applying same), cert. denied, 541 U.S. 1092 (2004).

missible evidence in formulating his opinion under Federal Rule of Evidence 703.” *United States v. Henry*, 472 F.3d 910, 914 (D.C. Cir.), cert. denied, 128 S. Ct. 240 and 128 S. Ct. 247 (2007). *Crawford* also made clear that the Confrontation Clause “does not bar the use of testimonial statements for purposes other than establishing the truth of the matter asserted.” 541 U.S. at 60 n.9 (citing *Tennessee v. Street*, 471 U.S. 409, 414 (1985)). When otherwise inadmissible facts or data underlying an expert’s opinion are admitted into evidence for the limited, non-hearsay purpose of assisting the jury to evaluate the expert’s opinion, the Confrontation Clause is not implicated, regardless of whether the facts or data include “testimonial statements” of witnesses not present at trial. See *State v. Tucker*, 160 P.3d 177, 194 (Ariz.), cert. denied, 128 S. Ct. 296 (2007); *People v. Thomas*, 30 Cal. Rptr. 3d 582, 587 (Ct. App. 2005); *State v. Bunn*, 619 S.E.2d 918, 920-921 (N.C. Ct. App. 2005); but see *People v. Goldstein*, 843 N.E.2d 727, 732-733 (N.Y. 2005) (rejecting the distinction between a statement offered as substantive evidence and a statement offered to shed light on an expert’s opinion), cert. denied, 547 U.S. 1159 (2006).

The Confrontation Clause and Rule 703 thus permit a qualified expert in forensic chemistry to review the records of laboratory work conducted by others on a suspected controlled substance, and any instrument output generated during that testing process, and testify to his opinion concerning the identity of the controlled substance that was tested, provided that those records and output are reasonably relied upon by experts in the field. See, e.g., *United States v. Moon*, 512 F.3d 359, 361 (7th Cir. 2008), petition for cert. pending, Nos. 07-1251, 07-10255 (filed Apr. 2, 2008); *Dunn v. State*, No.

A08A0611, 2008 WL 2684851, *2-*4 (Ga. Ct. App. July 10, 2008). Similarly, a qualified expert in the field of DNA analysis can present an opinion at trial concerning the results of DNA testing, regardless of whether that expert personally participated in the testing process. See, e.g., *State v. Crager*, 879 N.E.2d 745, 758 (Ohio 2007), petition for cert. pending, No. 07-10191 (filed Mar. 26, 2008).

Such expert testimony complies with the Confrontation Clause because the expert witness is available for cross-examination, and the only statement being presented to the jury as substantive evidence is the opinion testimony of that testifying expert. See *Crager*, 879 N.E.2d at 757-758; *Tucker*, 160 P.3d at 194; *State v. Little*, 654 S.E.2d 760, 763 (N.C. Ct. App. 2008); *Blaylock v. State*, No. 06-07-00090-CR, 2008 WL 2038273, *3-*4 (Tex. Ct. App. May 14, 2008); *Sauerwin v. State*, 214 S.W.3d 266, 269-270 (Ark. 2005). A defendant is free to challenge the expert's opinion by exposing the fact that the expert is relying on the reported results of testing that he did not conduct or witness. Cf., e.g., *United States v. Williams*, 447 F.2d 1285, 1289-1290 (5th Cir. 1971) (describing "intens[e]" cross-examination of expert in property valuation focused on probing the authenticity and accuracy of the sources on which he relied), cert. denied, 405 U.S. 954 (1972).⁸

⁸ Many of the "statements" on which an expert might rely to form his opinion also do not have characteristics of "testimonial statements," which is another reason why expert testimony based on records of the laboratory work of others raises no Confrontation Clause concerns. For instance, a serologist who must determine whether materials contain biological fluids that are suitable for DNA analysis (such as blood or semen) may record notes of the observations he makes or the tests he performs. Working notes of that nature are not intended to "bear

Rule 703 also serves important interests in judicial economy and laboratory efficiency. Scientific evidence often is the product of the combined efforts of laboratory employees (who conduct tests on the evidence and operate the instruments) and a forensic examiner (who, where necessary, evaluates the test results and forms the conclusion that is relevant at trial). See generally *Roberts v. United States*, 916 A.2d 922, 937 (D.C. 2007) (describing “team” structure of DNA-testing process at the FBI laboratory). Rule 703 permits scientific evidence to be presented at trial through a single knowledgeable witness who can be cross-examined. That procedure prevents the trial process and the jury from being overwhelmed by the presentation of multiple witnesses for each scientific test result. It also mitigates the substantial resource strain that would be placed on public and private laboratories if entire teams of employees were diverted from their day-to-day work to testify at trials.

witness” against a criminal defendant. Their purpose is to permit other laboratory employees who receive the evidence to make correct decisions about what to do next. See *People v. Rawlins*, 884 N.E.2d 1019, 1034-1036 (N.Y. 2008) (data and report generated by private DNA laboratory were not testimonial statements where technicians contemporaneously recorded their procedures and results to permit verification of their work by reviewers and technicians did not compare the DNA profile they generated to the defendant’s), petition for cert. pending, No. 07-10845 (filed May 9, 2008); *People v. Geier*, 161 P.3d 104, 140 (Cal. 2007) (concluding that biologist’s notes and report were not testimonial and noting that the records were generated as part of a standard scientific protocol and were not themselves accusatory), petition for cert. pending, No. 07-7770 (filed Nov. 14, 2007); *State v. Forte*, 629 S.E.2d 137, 142-144 (N.C.) (serologist’s report was not testimonial where it facilitated further examination of the evidence and the potential use of the report in court was only one purpose among several served by its creation), cert. denied, 549 U.S. 1021 (2006).

B. Notice-And-Demand Statutes Adequately Protect Confrontation Rights

In recognition of the fact that scientific evidence introduced in criminal trials often is not disputed and that laboratory work is impeded when employees must appear in court to testify about uncontested matters, a number of States have enacted “notice and demand” statutes. Notice-and-demand statutes “are a formalized means of effectuating a stipulation to the admissibility of matters which often are not in dispute.” *State v. Cunningham*, 903 So. 2d 1110, 1119 (La. 2005); see *Thomas v. United States*, 914 A.2d 1, 9 (D.C. 2006) (District of Columbia notice-and-demand statute was enacted to relieve chemists responsible for analyzing controlled substances from the necessity of appearing at trial when chain of custody and result of analysis are not in dispute; nevertheless, court invalidated the provision on Confrontation Clause grounds), cert. denied, 128 S. Ct. 241 (2007).

Notice-and-demand statutes take a variety of forms. They typically require that, by a specified date before trial, the government serve a copy of the scientific test result on the defense and inform the defense of its intent to offer a certificate of analysis (or, in some cases, the scientific report itself) at trial in lieu of testimony from the laboratory employee who conducted the testing. See, e.g., Ala. Code § 12-21-301 (LexisNexis 2005) (certificate of analysis and notice of intent to offer it at trial must be served on opposing party at least 40 days before trial); La. Rev. Stat. Ann. § 15:501(a) (2005) (requiring notice ten days before trial). Some statutes specify the information that a certificate of analysis must contain; that information can include descriptions of the labora-

tory analyst's background and the tests he or she performed. See, *e.g.*, Ala. Code § 12-21-300 (LexisNexis 2005); Tex. Code Crim. Proc. Ann. art. 38.41 (Vernon 2005). The statutes generally provide that, within a specified time frame, the defense may file a written demand that the laboratory employee be presented as a witness at trial. See, *e.g.*, Alaska Stat. § 12.45.084(e) (2006); Ohio Rev. Code Ann. § 2925.51 (LexisNexis 2006).⁹ If a timely demand is filed, the statutes provide either that the certificate of analysis is not admissible at trial (in which case the government must call the witness in its case-in-chief) or that a subpoena will issue for the laboratory witness and the defense may cross-examine the witness in its own case.¹⁰ When no timely demand for the witness's appearance is filed, the statutes provide that the certificate of analysis or scientific report is admissible at trial and constitutes *prima facie* evidence of certain facts, such as the identity and weight of the controlled substance that was tested. See, *e.g.*, Alaska Stat. § 12.45.084(a); Del. Code Ann. tit. 10, § 4330 (1999).

The variations among notice-and-demand statutes may raise different Confrontation Clause issues. But at a minimum, the statutes do not violate the Confrontation Clause when they merely require the defense to demand

⁹ In some cases, the written demand must include a certification by defense counsel that the defense intends to cross-examine the witness in good faith, a statement of the basis upon which the defense intends to challenge the scientific evidence, or both. See, *e.g.*, Ala. Code § 12-21-302; La. Rev. Stat. Ann. § 15:501.

¹⁰ See, *e.g.*, Del. Code Ann. tit. 10, § 4332 (1999) (when timely written demand is filed by defense, forensic chemist must appear as prosecution witness); Ala. Code. § 12-21-302(a) (party against whom certificate is offered may request hearing to show cause why subpoena should issue for cross-examination).

before trial that the laboratory witness be called to testify. A defense attorney's failure to make a demand constitutes a valid waiver of the defendant's confrontation rights, at least so long as the defendant receives adequate notice that a failure to demand the witness's testimony will waive confrontation rights. Cf. *State v. Caulfield*, 722 N.W.2d 304, 313 (Minn. 2006) (finding that state statute provided inadequate notice of consequence of failure to request testimony of laboratory employee).

As this Court has held, “[t]he most basic rights of criminal defendants are * * * subject to waiver[.]” *Peretz v. United States*, 501 U.S. 923, 936 (1991), including the right to confrontation, see *Brookhart v. Janis*, 384 U.S. 1, 4 (1966). Whether and to what extent to cross-examine a witness, and whether to stipulate to a fact in lieu of demanding testimony, are decisions that fall within counsel's control over trial strategy. See *Taylor v. Illinois*, 484 U.S. 400, 418 (1988); *Hinojosa-Mendoza v. People*, 169 P.3d 662, 669 (Colo. 2007), petition for cert. pending, No. 07-9369 (filed Feb. 4, 2008); *Wilson v. Gray*, 345 F.2d 282, 287-290 (9th Cir.), cert. denied, 382 U.S. 919 (1965). Notice-and-demand statutes that require counsel to decide before trial whether to confront and cross-examine a laboratory witness, and provide counsel the opportunity to review the written record of the scientific evidence that the government proposes to present at trial in lieu of that witness's testimony, are reasonable state procedural rules for the exercise of a constitutional right. See *Williams v. Georgia*, 349 U.S. 375, 382-383 (1955). Notice-and-demand statutes provide exactly what the Constitution guarantees: “an adequate *opportunity* to cross-examine adverse witnesses.” *United States v. Owens*, 484 U.S. 554, 557 (1988) (emphasis added). “[O]nly the timing of the

defendant's decision is changed." *Hinojos-Mendoza*,
169 P.3d at 668.¹¹

CONCLUSION

The judgment of the court of appeals should be affirmed.
Respectfully submitted.

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¹¹ Massachusetts contends (Br. 54-59) that petitioner had the opportunity to cross-examine the laboratory employees who prepared the certificates of analysis by issuing a subpoena under Mass. R. Crim. P. 17 or by exercising his right to compulsory process. Whether or not those avenues for securing cross-examination are adequate to safeguard Confrontation Clause rights—which is a question that was not reached or decided below—notice-and-demand statutes that simply structure when a defendant must decide whether he desires cross-examination of a laboratory witness do comply with the Confrontation Clause.