

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

**In the Matter of**

**CERTAIN VAPORIZER DEVICES,  
CARTRIDGES USED THEREWITH, AND  
COMPONENTS THEREOF II**

**Investigation No. 337-TA-1460**

**ORDER NO. 18: CONSTRUING CLAIM TERM**

(January 22, 2026)

**I. BACKGROUND**

The Commission instituted this investigation to determine whether certain vaporizer devices, cartridges used therewith, and components thereof infringe various claims of U.S. Patent No. 12,156,533. 90 Fed. Reg. 44238 (Sept. 12, 2025). The complainant is JUUL Labs, Inc., and the respondents are NJOY, LLC, NJOY Holdings, Inc., Altria Group, Inc., Altria Group Distribution Company, and Altria Client Services LLC. *Id.* The Commission Investigative Staff is not a party. *Id.*

The parties filed a joint chart identifying agreed and disputed claim terms, Joint Chart (EDIS Doc. ID 865817), and filed initial and responsive claim construction briefs. JLI Br. (EDIS Doc. ID 866382); NJOY Br. (EDIS Doc. ID 866377); JLI Reply (EDIS Doc. ID 867229); and NJOY Reply (EDIS Doc. ID 867193). A claim construction hearing was held. 1/8/2026 Tr. (EDIS Doc. ID 868623). At that hearing, the parties used demonstrative exhibits. JLI Demonstratives (EDIS Doc. ID 868235) and NJOY Demonstratives (EDIS Doc. 868236).

## II. RELEVANT LAW

It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). “[T]here is no magic formula or catechism for conducting claim construction.” *Id.* at 1324. Instead, weight may be attached to appropriate sources “in light of the statutes and policies that inform patent law.” *Id.*

The terms of a claim are generally given their ordinary and customary meaning, which is the meaning that the term would have to one of skill in the art at the time of the invention. *Id.* at 1312–13. The ordinary meaning of a claim term is its meaning to one of skill after reading the entire patent. *Id.* at 1321. The patent specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is intrinsic evidence, is “the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* “[B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

Definiteness is a statutory requirement of patentability. Under 35 U.S.C. § 112(b), the patent specification must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor regards as the invention.”<sup>1</sup> A claim is indefinite if, when “read in light of the specification” and “prosecution history,” it “fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). Because language has “inherent limitations,” the “reasonable certainty” standard exists to strike a “delicate balance,” “afford[ing] clear notice of what is claimed,” while recognizing those inherent limitations. 572 U.S. at 909, quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002). The definiteness requirement thus “mandates clarity, while recognizing that absolute precision is unattainable.” *Nautilus*, 572 U.S. at 910.

### III. LEVEL OF SKILL

The parties propose different skill levels for one of ordinary skill in the art. NJOY Br. at 6 and JLI Br. at 2. The parties agree that those differences do not matter for the issues addressed here. Tr. 29:25–30:14 (NJOY) and 53:7–21 (JLI). For purposes of this Order, I adopt NJOY’s proposal. *Genzyme Therapeutic Prods. Ltd. P’ship v. Biomarin Pharm. Inc.*, 825 F.3d 1360, 1372 (Fed. Cir. 2016) (failure to make a specific finding about the required level of skill in the art is not reversible error where the record did not show any meaningful differences in proposed definitions or that the outcome of the case would have been different based on which definition was selected).

### IV. AGREED CONSTRUCTION

The parties agree on the following construction:

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<sup>1</sup> Because the asserted patent claims priority to an application filed after September 16, 2012, it is subject to the AIA version of the statute. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 4(c), 125 Stat. 284, 296 (2011).

Claim Term and Claim	Agreed Construction
wherein the cartridge comprises a nicotine salt liquid formulation  Claim 1	Limiting

Joint Chart at 3. For purposes of this investigation, the agreed construction is adopted.

## V. CONSTRUCTION OF DISPUTED CLAIM TERM

The parties disagree on the following construction:

Claim Term and Claim	JLI Proposed Construction	NJOY Proposed Construction
the nicotine salt liquid formulation generates an inhalable aerosol upon heating in the electronic cigarette  Claim 1	Plain and ordinary meaning	Indefinite as a mixed apparatus and method claim under <i>IPXL Holdings, L.L.C. v. Amazon.com, Inc.</i> , 430 F.3d 1377 (Fed. Cir. 2005) and 35 U.S.C. § 112

*Id.*

NJOY contends that claim 1 is invalid as indefinite under 35 U.S.C. § 112(b) for being a mixed apparatus/method claim per the reasoning of the Federal Circuit in *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005). NJOY Br. at 2.

Claim 1 recites:

1. An electronic cigarette comprising a cartridge, wherein the cartridge comprises a nicotine salt liquid formulation, wherein:
  - (a) the nicotine salt liquid formulation comprises a salt of nicotine and an organic acid in a liquid carrier, wherein the organic acid is benzoic acid or lactic acid;
  - (b) the salt is present in an amount that forms a nicotine concentration of 0.5% (w/w) to 20% (w/w) in the nicotine salt liquid formulation;
  - (c) the liquid carrier comprises glycerol and propylene glycol; and
  - (d) the nicotine salt liquid formulation generates an inhalable aerosol upon heating in the electronic cigarette.

Claim 1 thus recites an electronic cigarette comprising a cartridge, where the cartridge comprises a nicotine salt liquid formulation, details of which are further recited in the claim.

Citing *IPXL*, NJOY states that “active method steps in a claim otherwise reciting a patented device such that it is impossible to identify the direct infringer—has long been known to render affected claims indefinite.” NJOY Br. at 2. As applied here, NJOY focuses on element 1(d), arguing that “[f]or claim 1, determining the direct infringer is impossible. It is written as a device claim, practiced upon manufacture, sale, importation, etc., suggesting direct liability for manufacturers and sellers. But its requirement of a ‘heating’ act sufficient to ‘generate an inhalable aerosol’ is incompatible with that approach. The ‘heating’ and subsequent generation of an inhalable aerosol act would only be practiced when—and if—an end-user actually heats that formulation. Heating is not practiced during manufacture or sale.” *Id.*

In *IPXL*, the Federal Circuit addressed an indefiniteness challenge to a dependent claim reciting: “The *system of claim 2* [including an input means] wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and *the user uses the input means* to either change the predicted transaction information or accept the displayed transaction type and transaction parameters.” 430 F.3d at 1384 (alteration and emphasis in original). The Federal Circuit stated that the claim recited both the system of claim 2 and a method for using that system, and the court held that it was unclear whether infringement of the claim occurs “when one creates a system that allows the user to change the predicted transaction information or accept the displayed transaction, or whether infringement occurs when the user actually uses the input means to change transaction information or uses the input means to accept a displayed transaction.” *Id.* Because the claim “recites both a system and the method for using that system,” the Federal Circuit concluded that “it does not apprise a person of ordinary skill in the art of its scope, and it is invalid under section 112, paragraph 2.” *Id.*

The trouble with the claim in *IPXL* was that it recited both a system and a method in which “the user uses the input means” of the system. For that same reason, the Federal Circuit has invalidated claims like that in *IPXL*. See, e.g., *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1318 (Fed. Cir. 2011) (“Like the language used in the claim at issue in *IPXL* (‘wherein . . . the user uses’), the language used in Katz’s claims (‘wherein ... callers digitally enter data’ and ‘wherein ... callers provide... data’) is directed to user actions, not system capabilities.”) and *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1336 (Fed. Cir. 2014) (“The present case falls squarely within the *IPXL* and *In re Katz* holdings. Here, the disputed language (‘wherein said user completes ...’and ‘wherein said user selects ...’) is nearly identical to the disputed language in those cases.”).

NJOY contends that the claim requirement that “the nicotine salt liquid formulation generates an inhalable aerosol upon heating in the electronic cigarette” is “an active step taken by the end user using the apparatus” and that the claim language can be met only when the electronic cigarette is used. See NJOY Br. at 2 and 8 and NJOY Reply at 4. NJOY is incorrect. Claim 1 does not recite a user performing an operation, such as using the claimed electronic cigarette or cartridge. Instead, in reciting that “the nicotine salt liquid formulation generates an inhalable aerosol *upon heating*,” the claim recites conditional functionality of the nicotine salt liquid formulation, contemplating but not reciting, either expressly or inherently, actual use of the electronic cigarette. As a result, and in contrast to the claim in *IPXL*, in reciting that “the nicotine salt liquid formulation generates an inhalable aerosol upon heating,” the claim recites a functional property of the nicotine salt liquid formulation. The claim language will be met by an electronic cigarette with a cartridge that has a nicotine salt liquid formulation with the claimed functional

property; that is, upon heating in the electronic cigarette, the nicotine salt liquid formulation generates an inhalable aerosol.

NJOY cites, but does not substantively discuss, the claim construction order in *Certain Unmanned Aerial Vehicles and Components Thereof*, Inv. No. 337-TA-1133. NJOY Reply at 4. There, the ALJ considered whether dependent claims improperly mixed method steps with the apparatus claim from which they depended. Order No. 15 at 23–24 (Jun. 21, 2019) (EDIS Doc. ID 679140). The independent claim recited a rotary wing aircraft apparatus, and the challenged dependent claims recited:

3. The apparatus of claim 1 **wherein the blade lock portion of the clockwise lock mechanism is rotated counterclockwise with respect to the shaft lock portion thereof to releasably attach the clockwise rotor blade to the first driveshaft.**
4. The apparatus of claim 3 **wherein the blade lock portion of the counterclockwise lock mechanism is rotated clockwise with respect to the shaft lock portion thereof to releasably attach the counterclockwise rotor blade to the second driveshaft.**

*Id.* at 9. The ALJ stated that claims 3 and 4 “specifically require activities performed by the user: It is the user who must rotate the blade lock portion to releasably attach the rotor blade,” which was supported by the specification, such that the claims were indefinite based on the rationale in *IPXL*. *Id.* at 23–24.<sup>2</sup>

The problem with the dependent claims in the 1133 investigation, identified by the ALJ, was that they required that the “mechanism is rotated,” which, although written in passive voice, “requires action by the user and does not merely describe the capability of the apparatus.” *Id.* at 24, n.8. Here, the claim recites that “the nicotine salt liquid formulation generates an inhalable aerosol

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<sup>2</sup> Because the patent owner subsequently withdrew claims 3 and 4, the Commission did not consider this issue when it reviewed the final initial determination. *See* Order No. 22 (Sept. 30, 2019) (EDIS Doc. ID 689654) and Comm’n Notice (Oct. 17, 2019) (EDIS Doc. ID 691514).

upon heating in the electronic cigarette.” As contrasted with the claim language in the 1133 investigation, the claim here includes conditional language; direct user action is not required.

This is consistent with how the Commission has analyzed *IPXL*. In *Certain Mobile Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers*, the claim recited a computer device including a processor, memory, touch-sensitive display, system code, and engine. Inv. No. 337-TA-794, Final Init. Det. at 448 (Sep. 14, 2012) (EDIS Doc. ID 492363). Apple argued that a claim was invalid as indefinite based on *IPXL* due to the following claim language:

Wherein, in response to the command detected by the interface process being a pan command, the engine pans the displayed document on the display at a rate based on the determined velocity vector.

*Id.* According to Apple, the claim required a user to input a pan command, that is, “the command detected by the interface process being the pan command,” and required the engine to pan in response to that command. *Id.* As a result, according to Apple, the claim improperly combined method-of-use steps into the apparatus claim. *Id.*

The ALJ concluded that the claim did not combine apparatus and method elements. *Id.* at 453–454. The limitations pointed to by Apple did not recite a method but “rather, disclose[d] how the system responds to a detected pan command: the engine pans the displayed document on the display at a rate based on the determined velocity vector.” *Id.* at 453. The ALJ concluded that “[t]his is functional language related to the engine that is included in the claimed computer device, and this limiting language is consonant with the Federal Circuit's holding in *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008): ‘Functional language may also be employed to limit the claims without using the means-plus-function format.’”

*Id.* at 454. The Commission adopted the ALJ’s analysis. 337-TA-794, Comm’n Op. at 101 (Jul. 5, 2013) (EDIS Doc. ID 512742).<sup>3</sup>

JLI contends that the Federal Circuit has distinguished situations in which an apparatus claim recites actual use from those that do not. JLI Br. at 6–7, citing *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307 (Fed. Cir. 2017). JLI analogizes the claims in *MasterMine* to the claim here. *Id.* at 6–8. NJOY contends that the claim here is different from that in *MasterMine*. NJOY Reply at 6–7. In *MasterMine*, the Federal Circuit reversed a holding of indefiniteness based on *IPXL*. 874 F.3d at 1312–16. The claim there recited “[a] system comprising ... a reporting module installed within the CRM software application ... wherein the reporting module installed within the CRM software application *presents* a set of user-selectable database fields as a function of the selected report template, *receives from the user a selection* of one or more of the user-selectable database fields, and *generates* a database query as a function of the user selected database fields.” *Id.* at 1315 (emphases in original).

The Federal Circuit noted that though the claim “includes active verbs—presents, receives, and generates—these verbs represent permissible functional language used to describe capabilities of the ‘reporting module.’” *Id.* The court further reasoned that, as in previous cases, “the claims at issue here merely claim that the system ‘possess[es] the recited structure [which is] capable of performing the recited functions,’” and “do not claim activities performed by the user.” *Id.*

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<sup>3</sup> See also *Certain Integrated Circuit Chips and Products Containing the Same*, Inv. No. 337-TA-859, Final Init. Det. at 39 (Apr. 21, 2014) (EDIS Doc. ID 532388) (“The term ‘wherein a noise from the substrate is kept away from the first pad layer by the lower electric-conduction layer’ only recites a functional capability of the lower electric-conduction layer. Unlike in *IPXL Holdings*, there is no actual recitation of a method step.”) and *Certain Oil-Vaping Cartridges, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-1286, Final Init. Det. at 40–44 (Feb. 1, 2023) (EDIS Doc. ID 791709) (holding that a claim reciting an atomizer and that “the atomizer is inserted into the container” was not invalid as indefinite under the *IPXL* rubric because one of skill would understand the recitation as one of structure).

at 1315–16. In particular, “[w]hile these claims make reference to user selection, they do not explicitly claim the user’s act of selection, but rather, claim the system’s capability to receive and respond to user selection.” *Id.* at 1316. The court distinguished *IPXL* and *Katz*, in which the claims “focus[ed] on specific actions performed by the user,” and distinguished *Rembrandt Data Technologies, LP v. AOL, LLC*, 641 F.3d 1331 (Fed. Cir. 2011), in which functional language appeared in isolation. *Id.* In *MasterMine*, by contrast, the functional language was “specifically tied to structure: the reporting module installed within the CRM software application.” *Id.*

The language of claim 1 here is like that in *MasterMine*, in reciting that the “the nicotine salt liquid formulation generates an inhalable aerosol upon heating in the electronic cigarette.” The use of the active verb—generates—is “permissible functional language” used to describe conditional functionality of the nicotine salt liquid formulation upon heating. *MasterMine*, 874 F.3d at 1315.

NJOY contends that “JLI’s suggestion that the claim should be interpreted as reciting what the electronic cigarette is capable of is nothing more than a veiled request to import the phrase ‘capable of’ into the claims. Basic principles of claim construction forbid this.” NJOY Reply at 1. There is, however, no importation of the term “capable of” into the claim. Instead, the claim by its language recites “upon heating,” thus expressly claiming a conditional functionality of the nicotine salt liquid formulation.

NJOY also argues that language in other claims and the specification demonstrates that “the inventors knew how to claim functionality, but chose to recite claim 1 as a method step.” NJOY Br. at 10. NJOY points to the use of “configured to” in claim 8 and column 49. NJOY Br. at 10 and NJOY Reply at 6, citing ’533 patent, cl. 8 and 49:10–12. Claim 8 depends from claim 1 and adds that “the cartridge is configured to serve as a mouthpiece and as a reservoir, wherein the

reservoir holds the nicotine liquid salt formulation.” Column 49 discloses that “the electronic cigarette is configured to generate an aerosol inhalable by the user.” To be sure, the Federal Circuit has interpreted “configured to” in some claims to not require concrete structures or actions. *See, e.g., Rothschild Connected Devices Innovations, LLC v. Coca-Cola Co.*, 813 F. App’x 557, 564 (Fed. Cir. 2020) (“Nor does claim 11 require that such communication actually occurs. All the claim requires is that the user interface module be ‘configured to’ receive the user and beverage identifiers.”). But NJOY does not identify any authority for the proposition that such language must be used to recite functionalities or capabilities, nor that the presence of such terms in some claims but not others means that the latter demands more than capability or functionality. “The art of claiming sometimes involves drafting claims in a variety of ways to encompass the disclosed subject matter.” *Vascular Solns. LLC v. Medtronic, Inc.*, 117 F.4th 1361, 1370 (Fed. Cir. 2024). Such variety does not support indefiniteness “so long as the claims themselves inform, ‘with reasonable certainty, those skilled in the art about the scope of the invention,’” as claim 1 does here. *Id.*, quoting *Nautilus*, 572 U.S. at 901.

NJOY also refers to method claim 11, contending that the “use of nearly identical language in method claims in the very same patent bolsters the conclusion that these claims are improper mixed method-and-apparatus claims.” NJOY Br. at 11. Claim 11 recites:

11. A method of providing nicotine to a user, the method comprising:
  - (a) heating a nicotine salt liquid formulation in an electronic cigarette to produce an inhalable aerosol, and
  - (b) inhalation of the aerosol by the user ...

The problem with NJOY’s argument is that claims 1 and 11 do not use nearly identical language. Claim 11 recites both heating and inhalation. Claim 1 recites that “upon heating,” the

nicotine salt liquid formulation generates an inhalable aerosol. Use of the word “upon” supports that actual heating is not required in apparatus claim 1, as contrasted with method claim 11.

NJOY points to various passages in the specification, which it contends describe that the purported “step of generating the ‘inhalable aerosol’ is dependent on a particular set of heating conditions that only arise when a user actually operates the claimed device to heat the formulation” and that the “formulation must be heated by using the device at a particular operating temperature, dependent on the formulation, including the type of acid, its corresponding vapor pressure, and the ratio of nicotine to other ingredients.” NJOY Br. at 8–9, citing ’533 patent at 10:12–36 (providing non-limiting example formulations), 11:30–39 (“[t]he amount of nicotine contained can be chosen by the user via the inhalation”), 13:37–57 (addressing the “mechanism of action during heating of the nicotine salt formulation”), and 16:66–17:9 (addressing characteristics of suitable acids “at the operating temperature of the electronic cigarette”). The various descriptions cited by NJOY are not determinative of whether the claim recites actual use by a user. It does not. Functional properties are claimed; actual use is not. Nothing in the specification suggests otherwise.

NJOY contends that the claim here is distinguishable from those in *UltimatePointer, LLC v. Nintendo Co.*, 816 F.3d 816 (Fed. Cir. 2016). NJOY Br. at 9–10. There, the Federal Circuit found that a claim reciting “a handheld device including: an image sensor, said image sensor generating data” was not indefinite based on *IPXL* because the claims recited “a handheld device with an image sensor capable of generating data, and recite[d] sufficient structure for that capability.” 816 F.3d at 819 and 826. The claims were “[u]nlike the claims in *IPXL* and *Katz*” because they did “not recite functionality divorced from the cited structure.” *Id.* at 827–28.

Here, on the other hand, NJOY contends that “the functionality at issue—the nicotine salt liquid formulation generates an inhalable aerosol upon heating—lacks any structure in the claim

and therefore falls squarely into the holdings of *IPXL* and *Katz*.” NJOY Br. at 10. NJOY is incorrect. The claim recites structure, namely an electronic cigarette comprising a cartridge that contains a nicotine salt liquid formulation. The nicotine salt liquid formulation has a claimed conditional functionality, namely, upon heating it generates an inhalable aerosol.

Nor is the claim here “on all fours” with those found indefinite in *Rembrandt*, as NJOY contends. NJOY Br. at 8. There, the claim did not specifically recite user action. 641 F.3d at 1339. Instead, the claim recited a “data transmitting device” that included a number of components (first buffer means, fractional encoding means, second buffer means, and trellis encoding means) and concluded with the phrase “transmitting the trellis encoded frames.” *Id.* The Federal Circuit held the claim invalid for indefiniteness, explaining that the first four elements of the claim recite apparatuses, whereas “[t]he final element is a method: ‘transmitting the trellis encoded frames.’” *Id.* That is not the case with claim 1 of the ’533 patent, which does not expressly recite a method step but instead recites a functional property of the nicotine salt liquid formulation.

NJOY contends that “it cannot be said with certainty that, at the time of sale, the particular heating conditions or actions will be applied to the device post-sale, so it is impossible to assess whether the sale of the device itself is a ‘direct infringement.’” NJOY Br. at 9. That, however, could be said with respect to any claimed functional property of an apparatus claim. In considering *IPXL*-based challenges, the Federal Circuit has been clear that “apparatus claims are not necessarily indefinite for using functional language.” *Microprocessor*, 520 F.3d at 1375. In *HTC Corp. v. ICom GmbH*, the Federal Circuit held that an apparatus claim directed to a “mobile station for use with a network” was not indefinite even though it recited actions of storing, holding, maintaining, causing, and deleting. 667 F.3d 1270, 1273, 1277–78 (Fed. Cir. 2012). The court reasoned that, unlike in *IPXL*, the claim there did not “recite a mobile station and then have the

mobile station perform the six enumerated functions,” but rather, “merely establish[ed] those functions as the underlying network environment in which the mobile station operate[d].” *Id.* at 1277. Though the claim format was unconventional, the court reasoned that the claim made clear “that infringement occurs when one makes, uses, offers to sell, or sells the claimed apparatus: the mobile station—which must be used in a particular network environment.” *Id.*

Analogously here, claim 1 recites an electronic cigarette with a cartridge comprising a nicotine salt liquid formulation that upon heating generates an inhalable aerosol. As in *HTC*, infringement occurs when one makes, uses, offers to sell, sells, or imports an electronic cigarette with a nicotine salt liquid formulation having that property.

The concern in *IPXL* was that it was “unclear whether infringement ... occurs when one creates a[n infringing] system, or whether infringement occurs when the user actually uses [the system in an infringing manner].” *IPXL*, 430 F.3d at 1384. The claim here does not pose that problem because it uses permissible functional language to describe conditional functionality of the nicotine salt formulation within the cartridge upon heating. It is, therefore, clear that infringement occurs when one makes, uses, offers to sell, or sells the claimed electronic cigarette with a nicotine salt formulation having that property. Because claim 1 of the ’553 patent informs one of skill of the scope of the invention with reasonable certainty, it is not invalid as indefinite under 35 U.S.C. § 112(b).

**SO ORDERED.**

  
Doris Johnson Hines  
Administrative Law Judge