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Testimony of Charlene Rittenbach, Forensic Scientist
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Senate Bill 2096

Chairman Thomas and members of the House Agriculture Committee.

I am Charlene Rittenbach, a Forensic Scientist with the North Dakota State Crime Laboratory. Following the federal legalization of hemp by the Agriculture Improvement Act of 2018, an industry has rapidly emerged to manufacture and sell consumable products that contain cannabinoids derived from hemp. The relative lack of federal regulation or enforcement of these products presents several challenges with implications for public health and safety and the ability of consumers to make informed choices about the products they consume.

Some of the regulatory challenges for cannabinoid hemp are chemically derived cannabinoids, products with intoxicating amounts of tetrahydrocannabinol (THC), youth access and lack of age restrictions, lack of testing requirements, lack of packaging and labeling standards, and lack of enforcement of FDA regulations. I will expand on each of these challenges briefly and then indicate how this bill is proposing to address some of them.

Semi-Synthetic Derivatives: Semi-synthetic derivatives or chemically derived cannabinoids refer to certain types of substances that are produced by converting a cannabis extract into a different substance through chemical reactions. This kind of process is commonly used to convert CBD, which is extracted from hemp and alone is not intoxicating, into THC or

other substances such as THC-O-acetate or hexahydrocannabinol (HHC). These chemically derived cannabinoids have escalated in the market for a variety of reasons, including due to a perceived legality, accessibility in the markets where cannabis remains illegal or difficult to access, and a lower cost compared to similar cannabis-derived products in part because they are not taxed, tested, or regulated like similar cannabis derived products.

Entirely separate from any concerns about dosage, toxicity, or intoxicating potential, there is a cause for concern related to impurities that can result from the manufacturing process by which a chemically derived cannabinoid is made. Without knowing the identity of the side-reaction products, which will vary depending on the specific synthetic route employed by the manufacturer, the potential toxicity of the side-reaction products also remails largely unknown.

Products with Intoxicating Amounts of THC: The ND definition of hemp limits hemp products to no more than 0.3% THC by weight, but 0.3% is <u>not</u> a non-intoxicating threshold, especially for edible products. Because the 0.3% is currently being applied towards other products than plant material, there are hemp-derived products that are currently being sold that contain far more than the allowable amounts of THC in most regulated adult-use cannabis markets but are legal under current policy because they stay under the limit of 0.3% THC by weight.

Youth Access and Lack of Age Restrictions: Federal legalization of hemp did not impose any age restrictions on the purchase of hemp products. Presumable, this was based on the assumption that hemp products would not be intoxicating. The reality is that many businesses are now manufacturing and selling intoxicating hemp-derived products containing significant doses of THC or intoxicating chemically derived cannabinoids.

Lack of Testing Requirements: State regulatory programs for cannabis also typically establish robust testing requirements for consumer products, including testing for potency,

pesticides, solvents, heavy metals, and mycotoxins or microbiological contaminants. At the federal level, hemp testing requirements are only established at the crop level to confirm that a crop is hemp rather than marijuana. There are no requirements or standards for finished product potency testing or for testing for other harmful contaminants.

Lack of Packaging and Labeling Standards: Most state regulatory programs for cannabis include robust requirements around the labeling of adult use and medical cannabis products. There are currently no federal standards requiring labels to disclose the THC content of hemp-derived products. As a result, products that may contain a significant amount of THC simply state that the product contains "less than 0.3% THC". Consumers of these products are not able to make informed decisions about the amount of THC or other chemically derived cannabinoids they are consuming.

Lack of Enforcement of FDA Regulations: The FDA has stated that CBD and THC cannot be added to any food that is sold in interstate commerce and that CBD and THC cannot be marketed as dietary supplements even if they are derived from hemp. Hemp-derived products are not currently following appropriate FDA notification or approval processes. To date, the FDA has taken minimal enforcement action, issuing warning letters to a small number of manufacturers or sellers of hemp-derived products when there are health claims that put the product into the category of unapproved drugs.

These are the current regulatory challenges that cannabinoid hemp face. I will now turn your attention to the draft of Senate Bill 2096 and I will walk through the definitions and explain how the language utilized attempts to address some of these regulatory issues.

Section 1 proposes to change the definition of hemp to mean the plant and any part of the plant, including flowers and remove the wording "all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers" to indicate hemp is only the plant or any part of the

plant. The 0.3% THC by weight requirement is still included in the definition (total THC concentration in an amount determined by the commissioner) and is only applied to the plant, any part of the plant, or flowers. Two other definitions, hemp extract and hemp commodity or product, were defined to mean everything else other than the plant or any part of the plant.

The definition of hemp commodity or product is further clarified to indicate what the term includes and what it does not include. For example, the term does not include a chemical compound extracted from hemp used to formulate, process or other make an inhalant, edible or combustible product or a product containing chemically derived cannabinoids. Hemp tinctures and hemp topicals fall under the hemp commodities and products definition and are themselves defined with maximum amounts of total THC permitted in milligrams.

Section 3 lists prohibited acts by the licensee of the hemp program in which the language that was added and adopted last legislative session was modified.

Section 4 of the bill describes that retailers may only sell hemp and hemp commodities or products allowed under this chapter and they must undergo testing and report results of the total THC concentration amount. Selling hemp or hemp commodities or products that contain chemically derived cannabinoids is not allowed.

I will mention that one of the regulatory challenges of hemp derived products that is not currently in this proposed bill is an age restriction requirement, but the committee is welcome to discuss and recommend a desired policy on this. The current thought was since chemically derived cannabinoids are not allowed to be sold, and no inhalants, edibles or combustibles are allowed, the age requirement would mainly come into play with hemp tinctures and hemp topicals. Some businesses are currently requiring age requirements to purchase CBD products, but it is not mandated.

Thank you for your attention and I would be happy to stand to answer any questions.