



International Grown Diamond
Association

www.theigda.org

June 3, 2016

VIA ELECTRONIC SUBMISSION

Federal Trade Commission
Office of the Secretary,
600 Pennsylvania Avenue, NW
CC-5610 (Annex O)
Washington, DC 20580

Re: *Guides for the Jewelry, Precious Metals, and Pewter Industries*, 81 Fed. Reg. 1349 (Jan. 12, 2016); FTC Project No. G711001

Dear Sir or Madam:

The International Grown Diamond Association (“IGDA”) respectfully submits these comments pursuant to the U.S. Federal Trade Commission’s (“FTC” or “Commission”) January 12, 2016 request for public comment on proposed amendments to the *Guides for the Jewelry, Precious Metals, and Pewter Industries* (the “Jewelry Guides” or “Guides”).¹

Based in Morrisville, North Carolina, IGDA is a not-for-profit trade association representing the laboratory-grown diamond industry. Founded in February 2016, IGDA is the first ever collective and comprehensive trade association to represent this emerging industry. The IGDA currently represents 21 member companies consisting of growers, distributors, retailers, and consumer brands. IGDA is advised by four pioneers of diamond research who are instrumental in supporting its efforts to create awareness about laboratory-grown diamonds based on scientific facts.² It is the IGDA’s mission to represent, educate, promote, develop, and grow this industry and to help consumers and others better understand the value and benefits that our members’ products bring to the jewelry industry. A key focus of the IGDA is to promote a marketplace where truthful, accurate, and non-misleading information can appropriately be conveyed to consumers about our members’ laboratory-grown diamond products and practices.³

¹ FTC, *Guides for the Jewelry, Precious Metals, and Pewter Industries*, 81 Fed. Reg. 1349 (Jan. 12, 2016).

² IGDA’s Technical Advisory Panel Members include Dr. Devi Shankar Misra, Prof. John C. Angus, Prof. Jes Asmussen, and Dr. James E. Butler. See <http://theigda.org/members-categories/>.

³ Consistent with this effort, IGDA has released a “Code of Conduct” for its members along with a set of best practices to ensure highest business ethics are implemented and followed across all levels in the laboratory-grown



I. INTRODUCTION

The innovation of gem-quality, laboratory-grown diamonds presents a breakthrough for consumers, and a powerful source of competition for producers. For decades, imitations and simulants were the only alternative for consumers who wanted the look of a mined diamond, but could not afford the cost of purchasing a mined diamond. More recently consumers have also been looking for conflict-free diamonds with significant ecologic advantage over diamonds. Recent advances in technology have made it commercially viable to produce laboratory-grown diamonds that satisfy these new consumer needs and are optically, physically and chemically equivalent to mined diamonds. Laboratory-grown diamonds sell at approximately 30% to 40% less than mined diamonds, and consumers are increasingly taking advantage of this new quality diamond option in a market historically dominated by mined diamonds.

Diamonds are a unique material with properties that far exceed any other known to man. A diamond is made up of a single element – carbon. The process of diamond growth is one of crystallization, with carbon atoms crystallizing under the right conditions, whether above or below the earth. The diamond industry is global in nature, and historically relied on a single source of supply – extraction from the earth in diamond mines.

Mined diamonds are a finite resource considering the extreme and rare occurrence of natural surroundings in which such diamonds can be formed. A mined diamond is generally formed deep inside Earth's upper mantle by crystallization of carbon, a process in which carbon atoms bond to each other, growing into a strong tetrahedral structure where each carbon atom is bonded to four other carbon atoms, resulting in diamond growth.⁴

In diamond-growing facilities, also known as “Diamond Growing Greenhouses,”⁵ this same crystallization process takes place above ground. The diamond growing technology permits the growth of colorless Type IIa diamonds (a rare quality that is found in less than 2% of global rough diamond production from mines) by creating diamond-growing conditions in these facilities, above the earth's surface.⁶ These facilities provide an ideal environment and favorable conditions under which carbon can naturally crystallize to form diamond. Crystallization, not synthesis, as the growth mechanism is underscored by the fact that gem-quality diamonds need a real (mined or laboratory grown) diamond seed to start the growth process. Without a diamond seed as a blueprint, carbon would not be able to crystallize to form a gem-quality diamond. The role of humans is limited to the creation of an environment in which diamond growth is possible. Once a

diamond industry. See IGDA, *Code of Conduct and Best Practices Agreement*; available at: <http://theigda.org/code-of-ethics-best-practices-agreement/>.

⁴ See Frost & Sullivan, *Grown Diamonds – Shaping Future of Diamond Industry* (2013), at 3; available at: <http://www.frost.com/sublib/display-market-insight.do?id=276747662>.

⁵ See Frost & Sullivan, *The Diamond Growing Greenhouses: Grown Diamonds in the Gems and Jewelry Industry* (March 2014); available at: <http://www.frost.com/sublib/display-market-insight.do?id=289565507>.

⁶ *Id.* at 4.



diamond seed is placed and growth conditions established, nature takes control of the growth process. As a result, like mined diamonds, it is virtually impossible to grow two absolutely identical diamonds.⁷

The properties of these laboratory-grown diamonds have been found to be optically, physically, and chemically identical to the earth-derived diamonds.⁸ The only difference between laboratory-grown diamonds and mined diamonds is their point of origin.⁹ Moreover, many of the human and environmental impacts associated with mining diamonds from the Earth are significantly lessened, and in some instances entirely removed, with laboratory-grown diamonds.¹⁰

A. Benefits to the Consumer

The ability to create laboratory-grown diamonds that are physically, chemically, and optically equivalent to mined diamonds has many significant benefits to consumers:

- Laboratory-grown diamonds offer significant environmental advantages over mined diamonds and requires a fraction of the resources of mining operations. This has become an important criterion for some consumers.¹¹
- Laboratory-grown diamonds offer a conflict-free source of diamonds.
- Laboratory-grown diamonds have introduced, for the first time, competition to the diamond industry. At the same price that a consumer would buy a much smaller, flawed mined diamond, they can now have a number of different options, including:
 - (1) A laboratory-grown diamond with the same 4C's at a lower price (approximately 30% to 40% less);
 - (2) A better Clarity at the same price;
 - (3) A higher Color at the same price; or
 - (4) A larger Carat weight at the same price.

See Table 1.

⁷ See Frost & Sullivan, *Grown Diamonds – Unlocking the Future of Diamond Industry by 2050*, at 17 (Dec. 2014); available at: www.frost.com/prod/servlet/cio/293408251.

⁸ See F&S, *Grown Diamonds – Shaping Future of Diamond Industry*, at 7.

⁹ See F&S, *Grown Diamonds – Unlocking the Future of Diamond Industry by 2050*, at 17.

¹⁰ See Frost & Sullivan, *Environmental Impact Analysis – Production of Rough Diamonds* (Nov. 2014); available at: <http://ww2.frost.com/news/press-releases/grown-diamonds-offer-eco-friendly-diamond-alternate-finds-frost-sullivan/>.

¹¹ *Id.*



Table 1: Comparison of median retail prices of laboratory grown diamonds and mined diamonds¹²

SI No.	Diamond Description				Laboratory-Grown Diamond	Mined Diamond			Price Difference
	Carats	Cut	Color	Clarity	Brilliant Earth	Blue Nile	James Allen		
1	0.50	Ideal	H	VS1	\$ 1,280	\$ 1,811	\$ 1,860	31%	
2	1.00	Ideal	H	VS1	\$ 4,630	\$ 6,982	\$ 7,030	34%	
3	1.50	Ideal	H	VS1	\$ 8,070	\$ 11,800	\$ 12,360	35%	
4	2.00	Very Good	H	VS1	\$ 14,150	\$ 21,068	\$ 22,980	38%	

Prices as on June 1, 2016

Until now, consumers who walked in to a store with limited budgets and particular diamond sizes in mind were restricted to a small number of choices. Their buying options have significantly increased with the introduction of laboratory-grown diamonds.

Competition will constrain the prices of all diamonds, regardless of source, and will require producers and sellers to strive harder to win consumers. The prospect of this competition explains many of the arguments against the laboratory-grown diamond industry, as members of the traditional establishment seek to protect their positions in the marketplace. Proposals to require nomenclature that disparages the quality and substitutability of laboratory-grown diamonds, and to prohibit truthful and non-misleading statements about these industry products, have little to do with consumer protection and much to do with competition restriction.

B. Increasing Market Size and Consumer Acceptance of Laboratory-Grown Diamonds

The NPD Group Inc.’s Diamond Tracker data shows that retail sales of laboratory-grown diamonds in 2016 is about 0.3% of total diamond retail sales (up from 0.1% in 2015),¹³ and it is expected to grow in the next 10-15 years. Frost & Sullivan – an independent market research and analysis firm – estimates that, in 2014, laboratory-grown diamond production was approximately 360,000 carats.¹⁴ By 2018, laboratory-grown diamond production globally is estimated to reach close to 2 million carats and by 2026 it is expected to cross 20 million carats.¹⁵

Competition, although beneficial to the customer, has had a positive effect on the retailers as well. As laboratory-grown diamonds are accepted by consumers it has created a new category of sales

¹² See Brilliant Earth’s website, available at: www.brilliantearth.com; Blue Nile’s website, available at: www.bluenile.com; James Allen’s website, available at: www.jamesallen.com.

¹³ The NPD Group Inc., *NPD Launches New Diamond Tracker Service* (April 20, 2016); available at: <https://www.npd.com/wps/portal/npd/us/news/press-releases/2016/npd-launches-new-diamond-tracker-service/>; see also JCK Online, *Lab-Grown Diamond Sales Triple but are Still Small* (May 20, 2016); available at: <http://www.jckonline.com/blogs/cutting-remarks/2016/05/20/lab-grown-diamond-sales-triple-are-still-small>.

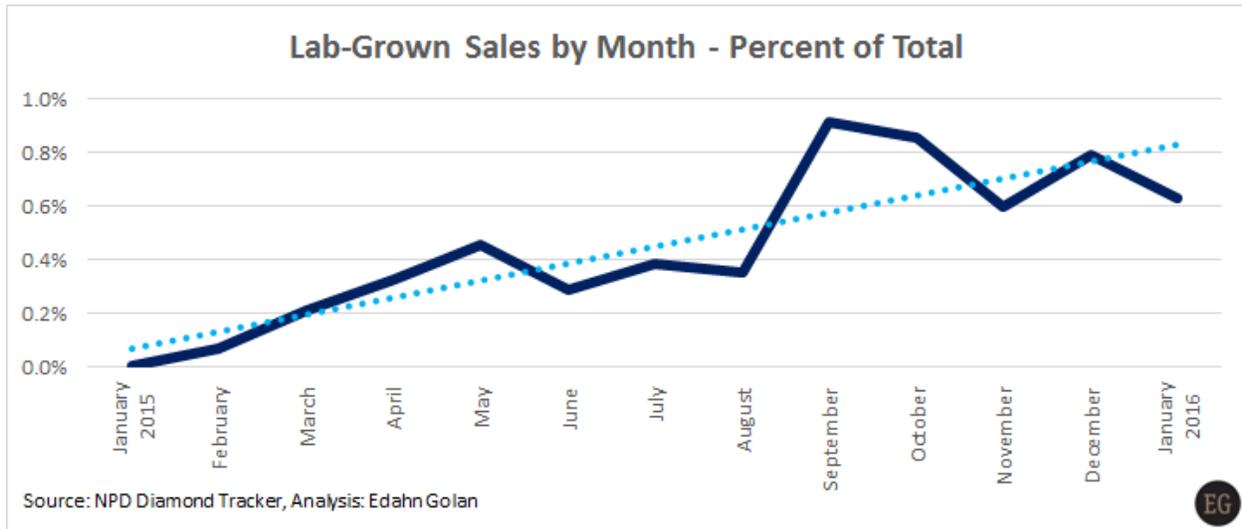
¹⁴ See F&S, *Grown Diamonds – Unlocking the Future of Diamond Industry by 2050*, at 19.

¹⁵ *Id.*



that retailers can rely on. Laboratory-grown diamonds are also a growing percentage of overall sales for retailers with the only hurdle being a perception of lower value that is being promoted by the Diamond Industry.

Figure 1: Laboratory-Grown Diamond Sales 2015-2016¹⁶



The following are some examples of what consumers have to say about their laboratory-grown diamond purchase:¹⁷

When my husband first told me about Chatham I was skeptical. However, after learning more about the process I decided to check them out. Once I saw Chatham jewelry in-person I knew that I'll never purchase a mined stone again. I'm telling all my friends about your beautiful gemstones.

– Sharon V., CA, A Chatham Created Gems & Diamond Customer

I knew when my boyfriend and I were planning on getting engaged, I wanted a ring with a center stone that was 100% conflict free. After going online to do research, I discovered Lab-Created Diamonds, and subsequently MiaDonna's website. The lab diamonds they are selling are identical in every way to an earth mined diamond with the only difference being that they are created in a lab. I ordered a ring with an Emerald Cut lab created center stone and was blown away by the beauty and quality of the diamond, for only a fraction of the price. I even took my ring to a mall jeweler and he praised the quality of the stone and confirmed it to be a carbon diamond with his tester. Being a consumer with a

¹⁶ Edahn Golan Diamond Research & Data, *The Lab-Grown Consumer Numbers You Need to Know About* (Apr. 19, 2016); available at: <http://edahngolan.com/the-lab-grown-consumer-numbers-you-need-to-know/>.

¹⁷ Additional examples are provided in **Exhibit C**.



conscience doesn't require sacrificing style, quality or service...you just have to find companies who are like-minded. Thank you MiaDonna and team xoxo.

– Briawna, A MiaDonna Customer

These reviews illustrate the increasing consumer acceptance of laboratory-grown diamonds. Consumer research conducted by IGDA and others (as described further below) find that consumers are not misled by marketing of laboratory-grown diamonds. There is, unfortunately, evidence that information from the mined diamond industry has contributed to consumer confusion and has impeded the growth of laboratory-grown diamonds.

C. Proposed Revisions to the Jewelry Guides

The IGDA is pleased that the FTC has undertaken this review of the Jewelry Guides. We believe that revisions to the Guides are necessary to provide much-needed guidance to the jewelry industry on laboratory-grown diamond products, to continue to promote these new and innovative products to consumers, and to prohibit deceptive and unfair practices being taken by others in the diamond industry to intentionally attach negative connotations to laboratory-grown diamond products.

These comments urge the Commission to revise the Jewelry Guides in three key areas applicable to laboratory-grown diamonds to allow truthful and non-misleading claims to be made about these products:

1. The Jewelry Guides should ***expressly permit*** use of the term “cultured diamonds” (without immediate qualifiers) to describe industry products created in a laboratory that have the same optical, physical, and chemical properties of mined diamonds;
2. The Jewelry Guides should ***prohibit*** the use of the term “synthetic” to describe laboratory-grown diamonds, as this term is misleading, deceptive, and confusing to consumers; and
3. The Commission should include new language in Section 23.11 of the Guides (*Definition and misuse of the word “diamond”*) to expressly address use and misuse of terms to describe laboratory-grown diamonds.

The IGDA’s proposed revisions to the Jewelry Guides are attached as **Exhibit A**. In addition, the results of consumer perception research conducted by Opinions Ltd. support these recommendations, and are attached as **Exhibit B**. In considering these comments, IGDA urges the Commission to consider the significant impact such regulations can have on this innovative and growing industry that has and will continue to bring significant value to consumers.

II. BACKGROUND

For many decades, the Jewelry Guides have provided marketers with clear direction regarding the use of truthful and non-misleading statements for jewelry industry products. Advertisers have followed the Commission’s lead and, in turn, generations of consumers have become accustomed to the proper use and disclosure requirements for these products. But as new and innovative



jewelry industry products, such as laboratory-grown diamonds, become more prevalent in the marketplace, these products require similar, clear direction from the Commission. The FTC's Jewelry Guides were first promulgated as trade practice rules on jewelry issues in 1918, and reissued by the Commission as Guides in 1979, both of which were well-before the laboratory-grown diamond industry existed. The Commission last completed a comprehensive review of the Jewelry Guides almost 20 years ago, and has made minor modifications to the Guides on four occasions since that time.¹⁸

A. Inclusion of Laboratory-Grown Diamonds in the Jewelry Guides

The FTC first addressed laboratory-grown industry products during its comprehensive review of the Guides in 1996.¹⁹ When the FTC initiated its review of the Guides in 1992, the Commission questioned whether the Guides should prohibit the use of the term “gemstone” as descriptive of synthetic or imitation product.²⁰ A number of commenters urged the Commission to permit alternative descriptors for various high-quality or high-valued gemstone products that were identical to a natural gemstone, but made by a process which included human intervention. These commenters urged the FTC to permit these products to be described as gemstones with appropriate qualification to indicate that they were laboratory-made.²¹

Based on the comments, the FTC permitted marketers to use the phrases “laboratory-grown,” “laboratory-created,” and “[manufacturer name]-created” in the revised Guides to describe gemstones. Although the Commission determined at the time that these terms more clearly communicate the nature of the stone, the FTC also permitted sellers to continue using the term “synthetic.”

The Jewelry Guides currently provide the following guidance for laboratory-grown or laboratory-created gemstones and other precious or semi-precious stone products: (1) the words “laboratory-grown,” “laboratory-created,” “[manufacturer name]-created,” “synthetic,” or by the word “imitation” or “simulated,” must be used to clearly disclose the nature of the product and the fact it is not a natural gemstone, and (2) such product must have essentially the same optical, physical, and chemical properties as the stone named. The relevant provisions of the Guides are provided below.²²

¹⁸ See FTC, *Statement of Basis and Purpose: Proposed Revisions to the Jewelry Guides*, at 1 (Dec. 2015) (“SBP”).

¹⁹ FTC, *Guides for the Metallic Watch Band Industry and Guides for the Jewelry Industry; Final Guides*, 61 Fed. Reg. 27178, at 27209 (May 30, 1996); available at: <https://www.gpo.gov/fdsys/pkg/FR-1996-05-30/pdf/96-13524.pdf>.

²⁰ FTC, *Request for Comments Concerning the Guides for the Jewelry Industry, the Guides for the Watch Industry, and the Guides for the Metallic Watch Band Industry*, 57 Fed. Reg. 24998, at 25000 (June 12, 1992).

²¹ See 61 Fed. Reg. 27178, at 27180 fn. 43.

²² 16 C.F.R. § 23.23.



§23.23 Misuse of the words “ruby,” “sapphire,” “emerald,” “topaz,” “stone,” “birthstone,” “gemstone,” etc.

...

(b) It is unfair or deceptive to use the word “ruby,” “sapphire,” “emerald,” “topaz,” or the name of any other precious or semi-precious stone, or the word “stone,” “birthstone,” “gemstone,” or similar term to describe a laboratory-grown, laboratory-created, [manufacturer name]-created, synthetic, imitation, or simulated stone, unless such word or name is immediately preceded with equal conspicuousness by the word “laboratory-grown,” “laboratory-created,” “[manufacturer name]-created,” “synthetic,” or by the word “imitation” or “simulated,” so as to disclose clearly the nature of the product and the fact it is not a natural gemstone.

(c) It is unfair or deceptive to use the word “laboratory-grown,” “laboratory-created,” “[manufacturer name]-created,” or “synthetic” with the name of any natural stone to describe any industry product unless such industry product has essentially the same optical, physical, and chemical properties as the stone named.

Furthermore, the Guides do not directly address the use of the terms “laboratory-grown” or “laboratory-created” in Section 23.11, which addresses the definition and misuse of the word “diamond.” The Guides include only a note in this section stating that “additional guidance about imitation and laboratory-created diamond representations and misuse of words ‘gem,’ ‘real,’ ‘genuine,’ ‘natural,’ etc., are set forth in §§23.23, 23.24, and 23.25.”²³

Since the Jewelry Guides last underwent a comprehensive review in 1996, there have been several technological advancements and developments in the laboratory-grown diamond industry that have spurred industry competition, and created a tremendous opportunity to significantly enhance diamond choices for consumers. These innovations began to worry the traditional industry, which has pursued several efforts since then to disparage laboratory-grown diamonds by getting them categorized along with diamond look alike or simulants. Indeed, in 2006, the Jewelers Vigilance Committee (“JVC”) and other associations representing the traditional diamond and cultured pearl industries petitioned the Commission to prohibit use of the term “cultured” in the laboratory-grown diamond industry, arguing that consumers do not understand the term with respect to diamonds.²⁴

The JVC’s petition alleged a “high level of confusion among consumers” concerning the term “cultured diamond,” but the results of JVC’s own consumer survey showed that an overwhelming number of consumers accurately understood the term without any further qualifiers. Specifically, more than two-thirds (67%) of respondents believed the term “cultured diamond” referred to a

²³ 16 C.F.R. § 23.11, n. 2.

²⁴ See Jewelers Vigilance Committee *et al.*, *In Re: Petition to Amend Guidelines for the Jewelry, Precious Metals, and Pewter Industries* (Dec. 11, 2006).



gemstone that either was created by man in a laboratory using natural substances or grown naturally with human intervention – both of which can be said to be true statements concerning laboratory-grown diamonds.²⁵ This is compared to the meager three percent (3.2%) of consumers that believed it was a gemstone found naturally in the earth.²⁶ After reviewing the record, the Commission determined there was insufficient evidence to conclude that using “cultured” in reference to laboratory-created diamonds or other laboratory-created gemstones would be either deceptive or unfair if marketers effectively qualified the term.²⁷

B. Proposed Revisions to the Jewelry Guides

In July 2012, the Commission published a Federal Register notice initiating a comprehensive regulatory review of the Jewelry Guides.²⁸ Based on comments received to the notice, a public roundtable conducted by FTC staff to obtain additional input on proposed revisions, and a review of the petitions submitted by several jewelry industry trade groups in 1986 and 2006 (including JVC’s petition discussed above), the FTC issued its proposed amendments to the Jewelry Guides on January 12, 2016.

In terms of laboratory-grown diamonds, the proposed revisions to the Guides advise marketers to qualify the term “cultured” when describing laboratory-created diamonds. The FTC’s proposed revisions explain that, based on consumer perception evidence provided by the Jewelers Vigilance Committee in 2012 (the “Harris study”), the Commission proposes adding a new diamond example stating it is not unfair or deceptive to use the term “cultured” to describe laboratory-created diamonds if the term is immediately accompanied by “laboratory-created,” “laboratory-grown,” “[manufacturer name]-created,” “synthetic,” or by another word or phrase of like meaning, so as to clearly disclose that it is a laboratory-created product.²⁹ Specifically, the FTC proposes to add the following as a new example in Section 23.12(c):

(3) The use of the word “cultured” to describe laboratory-created diamonds if the term is immediately accompanied, with equal conspicuousness, by the words “laboratory-created,” “laboratory-grown,” “[manufacturer name]-created,” “synthetic,” or by some other word or phrase of like meaning, so as to clearly disclose that it is a laboratory-created product.

²⁵ An additional seven percent (7.4%) believed the term to indicate that the gemstone was created by man in a laboratory using chemicals or artificial substances.

²⁶ *Id.* at Exhibit 1, at Question 9 (JVC Semantic Analysis Study, 2002). The petition also recognized that laboratory-grown diamonds could be marketed at substantially lower price point than mined diamonds. *Id.* at 9.

²⁷ *See* SBP at 101.

²⁸ FTC, *Guides for the Jewelry, Precious Metals, and Pewter Industries; Request for Public Comments*, 77 Fed. Reg. 39201 (July 2, 2012).

²⁹ 81 Fed. Reg. at 1351; 1356 (proposed Section 23.12(c)(3)).



III. FTC SHOULD REVISE THE GUIDES TO EXPRESSLY AUTHORIZE USE OF THE TERM “CULTURED DIAMONDS”

Laboratory-grown diamonds represent a unique and important category of jewelry industry products. Grown from a diamond seed under controlled conditions, these diamonds are physically, chemically, and optically equivalent to mined diamonds. Yet the proposed revisions to the Guides advise marketers to immediately qualify the term “cultured” when used to describe laboratory-created diamonds,³⁰ despite the evidence that “cultured diamond” appropriately conveys to consumers that the product is grown or made under controlled conditions and is not the same as a mined diamond.

In its *Statement of Basis and Purpose*, the FTC recognizes that the Guides do not currently address use of the term “cultured” to describe industry products created in a laboratory that have essentially the same optical, physical, and chemical properties of its mined counterpart.³¹ JVC and other industry groups have urged the Commission to prohibit laboratory-grown diamond products from being truthfully and accurately labeled or advertised with the term “cultured.” After considering these arguments, the Commission observed that there was insufficient evidence to conclude that using “cultured” in reference to laboratory-created diamonds or other laboratory-created gemstones would be either deceptive or unfair if marketers effectively qualified the term as proposed in Section 23.23.³²

In its proposed revisions, the Commission is considering changing a prescription to a proscription. Instead of advising advertisers to qualify the term “cultured,” something that can be done with proper context in an advertisement, the proposed Guide would expressly discourage use of the term without an immediate qualifier to describe laboratory-created diamonds.³³ For reasons we explain in detail below, this additional burden is unnecessary. The term “cultured diamond” is itself a qualification that truthfully conveys to consumers that the diamond to which it refers is not the same as a mined diamond.

The FTC’s *Statement of Basis and Purpose* (“SBP”) explains that the Commission is basing its proposal on the results of the 2012 Harris study, submitted by JVC. According to the SBP, the Harris study results “suggest that consumers interpret an unqualified ‘cultured diamond’ claim to mean that a ‘cultured diamond’ is natural.”³⁴ However, the core question that was asked in the

³⁰ 81 Fed. Reg. at 1351 (proposed 16 C.F.R. §23.12(c)(3)).

³¹ SBP, at 100.

³² See SBP, at 101 fn. 367 (citing FTC letter of July 21, 2008, declining to amend the Guides with respect to use of the term “cultured”).

³³ SBP, at 101 (“The proposed Guides advise marketers not to use the unqualified term “cultured” to describe laboratory-created diamonds”).

³⁴ SBP, at 103.



Harris study concerning the unqualified use of the term did not support the conclusion that a “cultured diamond” fits any particular definition of “natural.” The question stated as follows:

*Q815: For each of the following terms, please tell us whether you think the stone is a natural product, or manufactured?*³⁵

The Harris study reported that 53% of respondents believed the stone to be “natural,” while 47% believed the stone to be “manufactured.” Providing respondents with only these two choices – “natural” vs. “manufactured” – did not permit a comparison between the interpretations most relevant to consumers’ understanding. Limiting the universe of answers to these two choices forced consumers who properly understood a “cultured diamond” to mean a diamond formed under controlled conditions to choose between two definitions that were not mutually exclusive, and apply one or the other to a process that has characteristics of both. One cannot tell from the survey whether consumers were thinking of “natural” in the sense of sourcing or “natural” in the sense of composition. A consumer thinking that “natural” means “unadulterated” or “not artificial” could correctly regard a laboratory-grown diamond as natural. These results cannot stand for the proposition that consumers would interpret the term “cultured diamond” to mean that the product is mined or taken from a natural environment.

The *SBP* also cites the Harris study’s finding that consumers do not understand that a stone described with the unqualified term “cultured” is a laboratory-created stone.³⁶ There is nothing unusual about a finding that consumers may not identify the facilities that produce their products. The more important question is whether consumers are misled about a material aspect of a diamond when it is described as cultured. On this issue, the Harris study offers little evidence, but what it does offer suggests that consumers understand differences between cultured and mined diamonds. It did not find, for example, that consumers equate the value of cultured diamonds with that of mined diamonds. Eighty-four percent perceived the term “diamond” to have the highest value, overwhelming the 10 percent who gave a cultured diamond the highest value, and a smaller percentage still, just one percent, who selected “laboratory-grown diamond” as the most valuable.³⁷ None of the numbers indicates that a significant numbers of consumers are confused. Consumers perceive a clear difference between a “diamond” and a “cultured diamond.”

The Harris study results do not support a broad conclusion that marketers should be required to use further qualifiers in connection with the term “cultured diamond.” At most, the survey reveals the limits of knowledge that consumers have about most products. Incomplete information does not establish either misperception or deception. In order to test for true misunderstanding of the term “cultured,” the IGDA commissioned a consumer perception survey that asked consumers whether they misinterpreted an unqualified “cultured diamond” claim. The results of IGDA’s

³⁵ See Jewelers Vigilance Committee; Comment to the Jewelry Guides, 16 CFR Part 23, Project No. G711001; Comment No. 560895-00027 (Oct. 4, 2012); available at: <https://www.ftc.gov/policy/public-comments/comment-560895-00027>.

³⁶ *SBP*, at 103.

³⁷ *Id.*



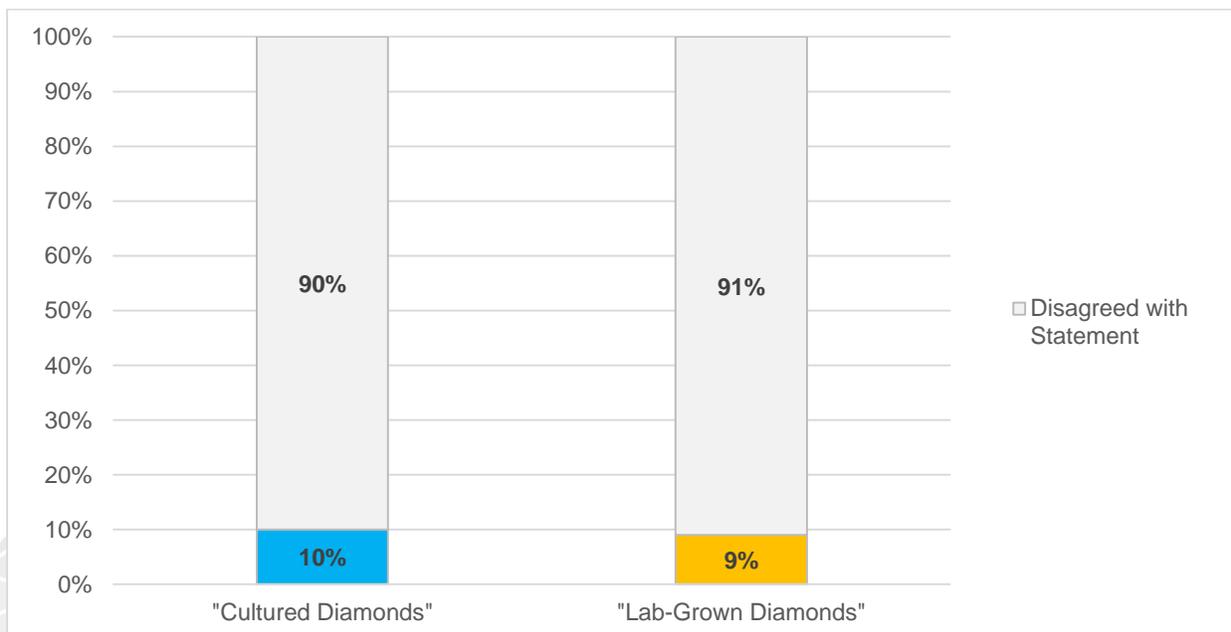
consumer perception research survey provide the opposite conclusion to the JVC’s supposed results – consumers clearly do not misunderstand the term “cultured diamond.” The IGDA urges the Commission to permit the use of the term “cultured diamond” to describe a laboratory-grown diamond as long as it is presented in a context that is truthful, accurate, and non-misleading to consumers.

A. Consumer Perception Survey Results Support the Use of the Term “Cultured Diamond” to Describe a Laboratory-Grown Diamond

In May 2016, Opinions Ltd. conducted a consumer perception research survey to, in part, evaluate respondents’ level of understanding of the term “cultured” to describe laboratory-grown diamonds, and compare this to respondents’ familiarity with laboratory-grown diamonds. One group of participants was shown an advertisement that featured several diamond rings with a prominent claim of “**cultured diamonds.**” A second group of participants were shown an identical advertisement containing the claim “**lab-grown diamonds.**” In each case, participants were asked questions that directly explored for a misunderstanding as to the source of a cultured diamond. Unlike the Harris study, which posed overlapping alternatives, the Opinions study asked mutually exclusive questions. Respondents were asked which, if any, of the following statements better described the diamonds in the advertisements: (1) they are diamonds taken out of the earth; (2) they are diamonds created in above-ground facilities; or (3) neither of the above.

The results demonstrate that consumers overwhelmingly rejected the characterization that “cultured diamonds” are taken out of the ground. Only ten percent (10%) of respondents believed that “cultured diamonds” were taken out of the earth. Ninety percent (90%) disagreed. The numbers were virtually identical to lab-grown diamonds. Only nine percent (9%) thought that lab-grown diamonds were taken from the ground. Ninety-one percent (91%) disagreed (*see Figure 2*).

Figure 2: Respondents Believing Diamonds to be Taken Out of the Earth





The vast majority correctly identified the source of each as created in above-ground facilities. Roughly three-quarters in each cell identified above-ground facilities as the source of “cultured diamonds” and “lab-grown diamonds” (72% and 77%, respectively).³⁸

B. Common Usage

According to Merriam Webster, the simple definition of cultured is “grown or made under controlled conditions,”³⁹ which precisely describes laboratory-grown diamonds. The term also describes cultured pearls, of course, but pearls are one of many applications of the adjective. Dictionaries refer to many common uses, such as cultured viruses, cultured cells, cultured tastes, and cultured manners. Consumers are well familiar with these uses, even if they may not know the details of the process followed to create “cultured” products in the many ways it occurs. There is no reason why “cultured” should be limited only to cultured pearls.

IV. USE OF THE TERM “SYNTHETIC” WHEN DESCRIBING LABORATORY-GROWN DIAMONDS IS FALSE AND MISLEADING TO CONSUMERS AND SHOULD BE PROHIBITED BY THE GUIDES

When the FTC last conducted its comprehensive review of the Jewelry Guides in 1996, the Commission recognized that the term “synthetic,” as applied to gemstones, was misunderstood by some consumers to mean something fake or artificial, and therefore permitted the use of alternative qualifiers, such as “laboratory-grown” and “laboratory-created,” to more clearly communicate the nature of these products.⁴⁰ Nonetheless, the FTC continued to permit sellers to use the term “synthetic” to describe laboratory-grown gemstones.⁴¹ By way of a footnote to Section 23.11, the current Guides also permit the term “synthetic” to be used to describe laboratory-grown diamonds.

Use of the terms “synthetic,” “imitation,” or similar words or phrases to describe laboratory-grown diamonds is not accurate and is misleading to consumers. Both laboratory-grown diamond and mined diamonds are formed by crystallization of carbon under appropriate heat and pressure. As the Guides prescribe, both mined and laboratory-grown diamonds must have the same physical, chemical, and optical properties. **Table 2** below illustrates the similarities between laboratory-grown and mined diamonds and how they differ from simulants that are properly considered “synthetic” or “fake”.

³⁸ See **Exhibit B**, at 9; 13.

³⁹ Available at: <http://www.merriam-webster.com/dictionary/cultured>.

⁴⁰ FTC, *Guides for the Metallic Watch Band Industry and Guides for the Jewelry Industry; Final Guides*, 61 Fed. Reg. 27178, at 27209 (May 30, 1996).

⁴¹ See 16 C.F.R. §23.23; see also 61 Fed. Reg. 27178, at 27209.



Table 2: Comparison of Laboratory-Grown Diamonds, Mined Diamonds, and Simulants⁴²

	Category	Chemical Composition	Crystalline Structure	Refractive Index	Dispersion	Hardness	Density
Lab-grown	Diamond	C	Cubic	2.42	0.044	10	3.52
Earth-derived	Diamond	C	Cubic	2.42	0.044	10	3.52
CZ	Simulant	ZrO ₂	Cubic	2.20	0.066	8.25	5.70
Moissanite	Simulant	SiC	Hexagonal	2.65	0.104	9.25	3.21
White Sapphire	Simulant	Al ₂ O ₃	Hexagonal	1.77	0.018	9	3.97
YAG	Simulant	Y ₃ Al ₅ O ₁₂	Cubic	1.83	0.028	8.25	4.60

The word synthetic, when applied to a diamond, gives consumers an impression that is the antithesis of the classification in the Guides. When consumers see the term “synthetic” describing a diamond, they think of something that does not share the same optical, physical, and chemical properties as a mined diamond. Consumers think of manufactured simulants that can closely resemble a diamond, but are not made of carbon. Imitations are typically made of glass, plastic, or cubic zirconium.⁴³

Laboratory-grown diamonds are often confused with simulants because of nomenclature, such as “synthetic” and “imitation,” that is commonly used by competitors in the industry to describe these products. Nomenclature generally helps communicate the qualities and origin of any product to the end consumer. However, when the nomenclature used does not accurately describe the nature of the product, this understandably will lead to consumer confusion.

The confusion created by the term “synthetic” is well-summarized by Anthony De Marco, a journalist at Jewelry Net Asia:⁴⁴

When you tell consumers that “synthetic” diamonds are real diamonds created in a lab; you are essentially telling consumers that they are fake diamonds but they’re real diamonds. Who wouldn’t be confused by this?

It’s the industry that’s confusing the consumer while at the same time giving lab-grown diamonds permanent second-class status in the marketplace.

The terms “synthetic” and “imitation” are ripe for intentional disparagement of laboratory-grown diamonds. Correct nomenclature will help to educate the consumer, and allow them to make an informed diamond-purchasing decision. The IGDA strongly urges the Commission to revise the Jewelry Guides to prohibit the use of terms such as “synthetic,” “imitation,” and other similar

⁴² F&S, *Grown Diamonds – Shaping Future of Diamond Industry*, at 12, Table 1.

⁴³ Cubic zirconium is the cubic crystalline form of zirconium dioxide, a material that is hard, optically clear and usually colorless

⁴⁴ DeMarco, Anthony, *There’s No Way Around it, Synthetic Means Fake* (Apr. 30, 2014); available at: http://www.jewellerynetasia.com/en-us/editorial/Blogs/555/5297/synthesis-in-the-production-of-lab-grown-diamonds?utm_source=adestra&utm_medium=email&utm_campaign=EDM20140507en.



words or phrases of like meaning to describe laboratory-grown diamonds in order to further protect consumers from receiving misinformation about these products, and minimize consumer confusion.

A. Consumer Perception Survey Results Demonstrate that the Use of the Term “Synthetic Diamond” to Describe a Laboratory-Grown Diamond is Misleading to Consumers

1. *Bain and Company (2012)*

According to a survey published in a joint report by Antwerp World Diamond Centre (AWDC) and Bain & Company in December 2012,⁴⁵ when people were asked “What words come to mind when you think about synthetic diamonds?” the most frequent answers were “cheap” and “fake”. The survey provides that:

In every country we studied, the reaction of consumers to synthetic diamonds was overwhelmingly negative. Wherever we asked consumers about their thoughts regarding synthetic diamonds, the most frequent answers were ‘cheap’ and ‘fake.’ ...

Interestingly, ‘fake’ and ‘cheap’ was the most prominent association in China, Russia, Germany, the UK and the US, while Italians and French more often just said ‘fake.’⁴⁶

The following word cloud from the Bain & Co. report shows the terms most frequently associated with synthetic diamonds, with text size indicating the most frequently provided responses.

⁴⁵ Bain and Company, The Global Diamond Industry: Portrait of Growth (2012); available at: http://www.bain.com/Images/BAIN_REPORT_Global_diamond_industry_portrait_of_growth_PDF.

⁴⁶ *Id.* at 18-19.





Figure 3⁴⁷



The survey results also indicate that consumers associate “synthetic” and “fake” diamonds with diamond simulants such as Cubic Zirconia, Moissanite, White Sapphire and YAG, all of which are chemically, physically, and optically different from mined (and laboratory-grown) diamonds.

2. Frost & Sullivan (2014)

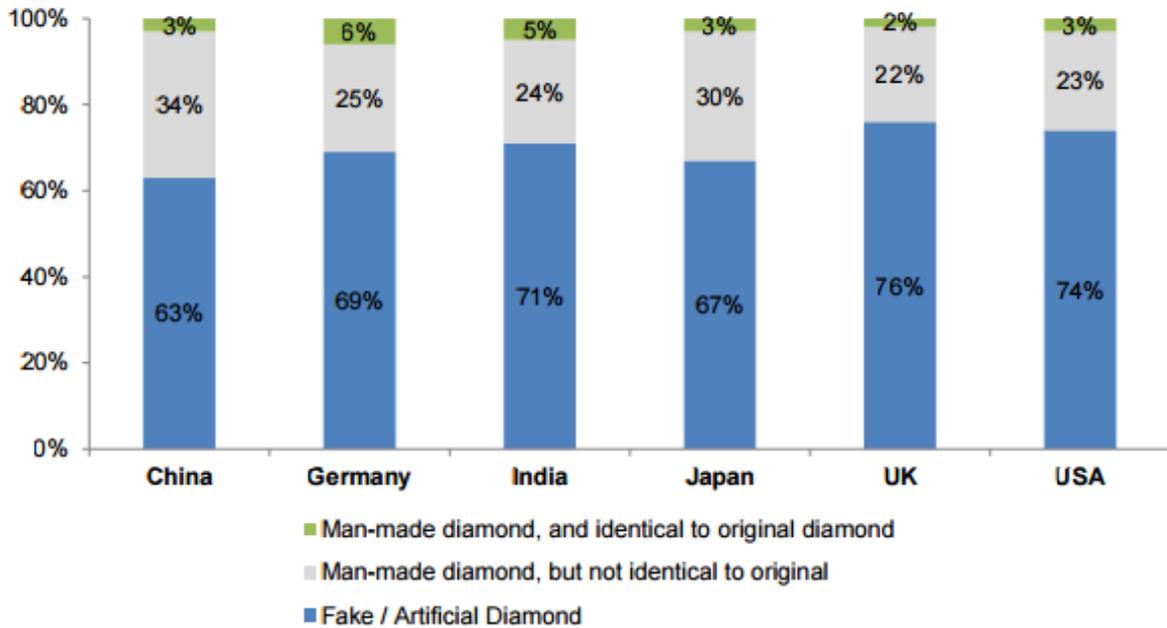
Similar research was conducted by Frost & Sullivan in 2014. The report, entitled *The Diamond Growing Greenhouses: Grown Diamonds in the Gems and Jewelry Industry*, further details consumer confusion when “synthetic” is used to describe laboratory-grown diamonds.⁴⁸ Specifically, the Frost & Sullivan report explains that the term “synthetic” might have different meanings in different contexts, but in the context of a diamond it leads to a perception of the diamond being “fake” or “not real.” Even when survey respondents who had been educated on laboratory-grown diamonds during the survey were asked to choose what a “synthetic diamond” meant to them from a set of descriptors, over 74% of U.S. respondents chose “Fake/Artificial diamond” (see **Figure 4** below).

⁴⁷ *Id.*, at 18, Figure 3.5.

⁴⁸ See F&S, *The Diamond Growing Greenhouses: Grown Diamonds in the Gems and Jewelry Industry*.



Figure 4 - Frost & Sullivan Report (2014):
What does the word “synthetic diamond” mean to you?



Because even respondents who had been educated on laboratory-grown diamonds during the course of the survey thought the term “synthetic diamond” to mean fake or artificial, this clearly evidences the disconnect that the word “synthetic” creates, and illustrates how misleading the term “synthetic” can be to the average consumer. In its report, Frost & Sullivan concluded that:

With respect to grown diamonds, nomenclature will play an imperative role in the acceptability of these diamonds by consumers of fine jewelry. Appropriate nomenclature will ensure accurate messaging of the product’s value proposition to the consumers. Removal of descriptors such as “Synthetic” will help avoid the situation of an average consumer confusing grown diamonds with simulants.⁴⁹

3. Opinions Ltd (2016)

The consumer perception research survey conducted by experts at Opinions Ltd. also sought to evaluate and measure respondents’ perception of the term “synthetic” when used to describe diamonds. One group of respondents was asked a closed-ended question concerning what the term “synthetic diamond” meant to them. Another group was asked to identify the word(s) they would use to describe a synthetic diamond. The results confirmed that consumers believed “synthetic diamond” to mean something that is an imitation or fake.

Specifically, in the first group, when asked whether synthetic meant identical to a mined diamond or meant imitation or fake, more than 50% of participants in the group believed it to be the latter,

⁴⁹ *Id.* at 26.



artificial or human intervention.” For example, in a De Beers recent publication, “Undisclosed Synthetics Booklet,” industry is instructed to “always describe synthetics with one of the following terms: ‘synthetic’, ‘manmade’, ‘artificial’ or ‘lab-created’. Never use the word ‘diamond’ to describe or identify any object or product not meeting the definition.”⁵⁰ Moreover, it defines a diamond as, “a natural mineral consisting essentially of pure carbon crystallized with a cubic structure in the isometric system.”⁵¹

Indeed, at the 37th edition of the World Diamond Congress held in May 2016, the World Federation of Diamond Bourses (WFDB) and International Diamond Manufacturer’s Association (IDMA) passed a resolution to call on gemological laboratories around the world to adapt special terminology for “synthetic” diamonds.

2. ***Banning of laboratory-grown trading in 2 out of 30 diamond bourses out of the world:*** The Israeli and Indian Diamond Bourses have passed regulations disallowing the sale of laboratory-grown diamonds within the bourse. The bourses around the world are centralized market places where members collectively trade in diamonds. The banning of laboratory-grown diamonds has been justified by World Federation of Diamond Bourses’ President, Ernie Blom:

“As the Bharat Diamond Bourse said in its media statement following the vote in favor of banning synthetic/laboratory-grown diamonds, its decision aims to ensure the growth of the natural diamond trade, strengthen consumer confidence and reassure faith and trust in diamonds. These are aims that the WFDB fully supports.”

– Ernie Blom, President, WFDB

3. ***Forming International Organization for Standardization (ISO) standards without laboratory-grown diamonds industry participation:*** In 2015, ISO published a new standard, ISO 18323:2015, “Jewellery – Consumer confidence in the diamond industry” defining the nomenclature and terminologies that should be used for laboratory-grown diamonds, treated diamonds, and mined diamonds. While the standard permits use of the term “laboratory-grown diamond” and “laboratory-created diamond,” it also permits use of the term “synthetic” and defines these products as an “artificial product that has essentially the same chemical composition, crystal structure and physical (including optical) properties as a diamond.” Moreover, the standard provides that “where there is no acceptable local direct translation of the English terms laboratory-grown diamond or laboratory-created diamond then only the translation of the term synthetic diamond should be used.” The ISO Technical Committee that formed the new standard for ISO was made up with members from CIBJO, The World Jewellery Confederation, which includes only entities from the mined diamond industry. This standard is not a guideline. ISO standards

⁵⁰ De Beers, *Undisclosed Synthetics: What You Need to Know* Booklet, at 2-3; available at: <https://www.diamonds.net/Docs/Synthetics/SYN-DeBeers-Undisclosed-Synthetics-booklet-110913.pdf>.

⁵¹ *Id.* at 1.



are global and become automatically enforceable and binding on any entity wanting to maintain the ISO certification.

4. **Implementing discriminatory grading terminology for laboratory-grown diamonds:** The International Diamond Council's (IDC) Rules contain diamond grading guidelines devised by the IDC.⁵² While the rule book recommends clear identification of laboratory-grown diamond on the certificates, it also recommends that terms describing color (D-P) and clarity (VVS1, VS1, SI1 etc.) should be changed to implement groups of descriptive grading terms for laboratory-grown diamonds (a comparison of the current color and clarity grading used for mined diamonds and laboratory-grown diamonds is provided in **Exhibit D**). Such groupings will be more opaque to consumers and will allow confusing comparisons. Moreover, the rules require that these products be identified as "synthetic diamonds." This differentiation is likely to mislead customers – both those who are educated as to the grading standards for diamonds and those just learning for the first time – into believing that a laboratory-grown diamond is not a diamond.

In addition to creating impediments to the communications of the laboratory-grown diamond industry, mined diamond representatives have made statements confusing consumers' understanding laboratory-grown diamonds. An example of the misleading use of "synthetic" appears in the blog from Florida-based retailer, Abazias Inc., titled "The difference between Real and Synthetic Diamonds". The author represents that:⁵³

The most obvious difference between genuine diamonds and fake diamonds (also called synthetic diamonds, simulated diamonds or diamond enhancements) is that real diamonds form naturally inside the earth. Fake diamonds are created in a laboratory or factory and are manufactured rather than mined. Simulated diamonds are designed to look like real diamonds."

Another example of misleading consumers is the following statement by De Beers company spokesperson:⁵⁴

"Synthetics may be big and they may be white but they ain't diamonds. To call them diamonds is misleading"

⁵² The International Diamond Council, *IDC-Rules for Grading Polished Diamonds* (v. 2013); available at: <http://www.internationaldiamondcouncil.org/sites/default/files/downloads/IDC-Rules%20Version%202013%20%28July%29.pdf>. The World Federation of Diamond Bourses and International Diamond Manufacturer's Association together form the International Diamond Council.

⁵³ The Difference Between Real and Synthetic Diamonds (Jul. 22, 2011); available at: <http://www.abazias.com/diamondblog/diamond-education/the-difference-between-real-and-synthetic-diamonds>.

⁵⁴ The Shine Times, *De Beers Rains on Gemesis Parade* (April 23, 2013); available at: <http://instoremag.com/shine-times/de-beers-rains-on-gemesis-parade>.



In addition, in a letter to De Beers Sightholders (*i.e.*, those listed as authorized bulk purchasers of rough diamonds), De Beers CEO, Phillip Mellier states the following⁵⁵:

De Beers' view of synthetics is clear and unchanged. Our extensive consumer insight research repeatedly shows that when it comes to life's most important moments, consumers want natural diamonds. Only the inherently rare gem that nature created billions of years ago is precious enough to serve as this powerful symbol. While it is possible that appropriately disclosed synthetics could find a legitimate place in the industry (low value synthetic ruby and emerald jewellery has existed for decades in the sub-\$200 retail price point), passing off a synthetic as a natural diamond threatens consumers' confidence in diamonds, and is at best unethical and at worst fraudulent.

The comparison of a “synthetic” diamond to low value imitation stones shows how the adjective is used to disparage the quality of laboratory-grown diamonds. Reinforcing the common misunderstanding of “synthetic” has little to do with consumer protection and much to do with competition restriction. The IGDA urges the Commission to revise the Jewelry Guides to prohibit the use of these terms to describe laboratory-grown diamonds in order to further protect consumers from receiving misinformation about these products, and minimize consumer confusion.

V. FTC SHOULD MODIFY SECTION 23.11 OF THE GUIDES TO EXPRESSLY ADDRESS THE USE AND MISUSE OF TERMS USED TO DESCRIBE LABORATORY-GROWN DIAMONDS

Laboratory-grown diamonds represent a unique and important category of jewelry industry products and, accordingly, the Commission should include new language in Section 23.11 of the Guides (*Definition and misuse of the word “diamond”*) to expressly address the use of the terms “laboratory-created,” “laboratory-grown,” “[manufacturer name]-created,” and other similar words or phrases of like meaning to describe laboratory-grown diamonds, along with misuse of terms, such as “synthetic,” “imitation,” or other similar words. Currently, guidance on use of these terms is provided only in relation to misuse of the words “ruby,” “sapphire,” “emerald,” “topaz,” “stone,” “birthstone,” and “gemstone” in Section 23.23. Only by way of a footnote in Section 23.11, do the Guides refer to additional guidance “about imitation and laboratory-created diamond representations” in Section 23.23.

Laboratory-grown diamonds represent a breakthrough for consumers looking to purchase diamonds. This new choice is gaining acceptance and saving consumers millions of dollars. The potential is far greater still, but it is vulnerable to misunderstanding by consumers and attacks by entrenched interests in the industry. The Commission is in a position to mitigate both threats. For instance, as discussed above, IGDA urges the Commission to prohibit the use of the term

⁵⁵ Letter from Philippe Mellier (CEO, De Beers Group) to Sightholders (Nov. 8, 2013); *available at*: <https://www.diamonds.net/Docs/Synthetics/SYN-DeBeers-Ltr-Philippe-Mellier-synthetics-110813.pdf>.



“synthetic” to describe laboratory-grown diamonds.⁵⁶ Providing additional clarifying language in Section 23.11 will help to provide clear guidance for laboratory-grown diamonds and the jewelry industry in general, and will help to avoid any potential confusion between the guidance provided for gemstones and guidance provided for diamonds and laboratory-grown diamonds.

VI. CONCLUSION

The IGDA and its member companies appreciate the significant time and resources the FTC has made to evaluate claims for jewelry industry products, including laboratory-grown diamonds. The FTC should continue to allow this unique and innovative industry to continue to develop and grow. The consumer perception research results support IGDA’s position that: (1) use of the term “cultured diamond” should be *expressly permitted* without immediate qualifiers to describe diamonds created in a laboratory that have essentially the same optical, physical, and chemical properties of mined diamonds; and (2) use of the term “synthetic diamond” should be *prohibited* to describe laboratory-grown diamonds, as this term is misleading and confusing to consumers.

* * *

Thank you for the opportunity to comment on these very important issues to the industry. Should you have any questions, please do not hesitate to contact us.

Respectfully submitted,

Richard S. Garard
Secretary General
International Grown Diamond Association

Enclosures

⁵⁶ The IGDA takes no position on similar terms used to describe “ruby,” “sapphire,” “emerald,” “topaz,” “stone,” “birthstone,” or “gemstone.”

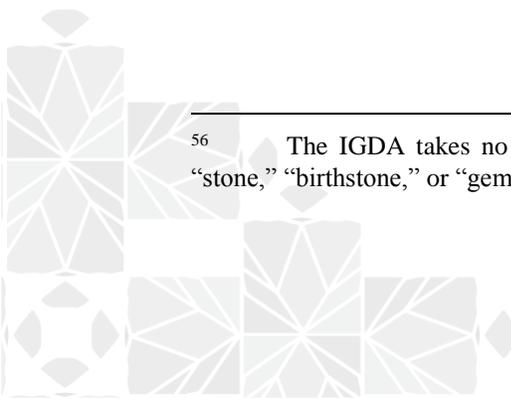


EXHIBIT A

Proposed Edits to the FTC Jewelry Guidelines

§ 23.11 Definition and Misuse of the Word “diamond”

(a) A diamond is a natural mineral consisting essentially of pure carbon crystallized in the isometric system. It is found in many colors. Its hardness is 10; its specific gravity is approximately 3.52; and it has a refractive index of 2.42.

(b) It is unfair or deceptive to use the unqualified word “diamond” to describe or identify any object or product not meeting the requirements specified in the definition of diamond provided above, or which, though meeting such requirements, has not been symmetrically fashioned with at least seventeen (17) polished facets.

NOTE 1 TO PARAGRAPH (b): It is unfair or deceptive to represent, directly or by implication, that industrial grade diamonds or other non-jewelry quality diamonds are of jewelry quality.

(c) The following are examples of descriptions that are not considered unfair or deceptive:

(1) The use of the words “rough diamond” to describe or designate uncut or unfaceted objects or products satisfying the definition of diamond provided above; ~~or~~

(2) The use of the word “diamond” to describe or designate objects or products satisfying the definition of diamond but which have not been symmetrically fashioned with at least seventeen (17) polished facets when in immediate conjunction with the word “diamond” there is either a disclosure of the number of facets and shape of the diamond or the name of a type of diamond that denotes shape and that usually has less than seventeen (17) facets (e.g., “rose diamond”); ~~or~~

(3) The use the words “laboratory-grown,” “laboratory-created,” “cultured,” “[manufacturer name]-grown,” “[manufacturer name]-created,” or some other word or phrase of like meaning in conjunction with “diamond” to describe or designate products having essentially the same optical, physical, and chemical properties as a natural diamond and satisfying the definition of diamond provided above, but which have been created in a laboratory or other similar facility.

NOTE 2 TO PARAGRAPH (c): Additional guidance about ~~imitation and laboratory created diamond representations~~

~~and~~ misuse of words “gem,” “real,” “genuine,” “natural,” etc., are set forth in § ~~23.23~~, 23.24, and 23.25.

(d) It is unfair or deceptive to use the word “synthetic,” “imitation” or similar terms to describe any laboratory-grown diamond if the product has essentially the same optical, chemical, and physical equivalent properties of natural diamonds.

* * *

§ 23.23 Misuse of the Words “ruby,” “sapphire,” “emerald,” “topaz,” “stone,” “birthstone,” “gemstone,” etc.

(a) It is unfair or deceptive to use the unqualified words “ruby,” “sapphire,” “emerald,” “topaz,” or the name of any other precious or semi-precious stone to describe any product that is not in fact a natural stone of the type described.

(b) It is unfair or deceptive to use the word “ruby,” “sapphire,” “emerald,” “topaz,” or the name of any other precious or semi-precious stone, or the word “stone,” “birthstone,” “gemstone,” or similar term to describe a laboratory-grown, laboratory-created, [manufacturer name]-created, synthetic, imitation, or simulated stone, unless such word or name is immediately preceded with equal conspicuousness by the word “laboratory-grown,” “laboratory-created,” “[manufacturer name]-created,” “synthetic,” or by the word “imitation” or “simulated,” so as to disclose clearly the nature of the product and the fact it is not a natural gemstone.

NOTE 1 TO PARAGRAPH (b): The use of the word “faux” to describe a laboratory-created or imitation stone is not an adequate disclosure that the stone is not natural.

(c) It is unfair or deceptive to use the word “laboratory-grown,” “laboratory-created,” “[manufacturer name]-created,” or “synthetic” with the name of any natural stone to describe any industry product unless such industry product has essentially the same optical, physical, and chemical properties as the stone named.

NOTE 2 TO PARAGRAPHS (b) and (c): Specific guidance concerning laboratory-created diamonds is set forth in § 23.11.

EXHIBIT B

Opinions Ltd. Consumer Perception Research Survey



Laboratory-Grown Diamond Consumer Perception Research

May 2016

Walk every step in the shoes of your consumers.



Leaders in Research

This study was designed and executed by Opinions LTD, a top leader in the market research industry. Opinions LTD, the premier owned and operated market research and data collection firm in the United States with over 18 years of industry experience. Clients of the firm include global giants and F50s. This research was conducted in strict adherence with the professional standards and practices outlined by the American Marketing Association, Marketing Research Association and ESOMAR, of which Opinions LTD is a member in good standing.

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Background & Objectives

The research was conducted following the Federal Trade Commission's proposed revisions to the Guides for the Jewelry, Precious Metals, and Pewter Industries (Jewelry Guides).

The objectives of the research were to:

- Measure respondents' familiarity with and knowledge of laboratory-grown diamonds.
- Determine respondents' level of understanding of the term "cultured" to describe diamonds.
- Determine and measure respondents' perception of the term "synthetic" to describe diamonds.

Methodology

Consumer Test Details

- The consumer research study was conducted online within the United States from May 5 – 9, 2016, by Opinions LTD among respondents age 18 and older.
- The survey consisted of 50% males and 50% females, with even distribution across all age groups. Ethnicity was weighted where necessary to align with actual population proportions in accordance with the 2012 U.S. Census.
- Respondents for this survey were selected from among those who agreed to participate in Opinions LTD surveys.
- The survey consisted of four cells, each containing 200 respondents:
 - In cell 1, respondents were shown an advertisement for “lab-grown” diamonds.
 - In cell 2, respondents were shown an advertisement for “cultured” diamonds.
 - In cell 3, respondents were asked to choose a statement that best describes a “synthetic” diamond.
 - In cell 4, respondents were asked to describe a “synthetic” diamond in an open-ended question.
- On average, the survey took between 7 – 10 minutes to complete.

Executive Summary

Lab-grown and cultured diamonds are viewed similarly by respondents. At least 75% of respondents felt both lab-grown and cultured diamonds are created in above-ground facilities. About 10% felt they are taken out of the earth.

Lab-Grown:

- At least 75% of respondents felt lab-grown diamonds are created in above-ground facilities.
 - Respondents with \$100,000 or more income (91%), respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (86%), respondents ages 65+ (84%) and married/civil union respondents (83%) trended most likely of the subgroups to believe this.
- Only 9% of total respondents felt lab-grown diamonds are taken out of the earth.
 - Respondents ages 35 – 44 (18%) trended most likely of the subgroups to believe this.

Cultured:

- At least 70% of respondents felt cultured diamonds are created in above-ground facilities.
 - Respondents ages 55 – 65+ (85% 55 – 64 and 80% 65+) and female respondents (79%) trended most likely of the subgroups to believe this.
- Only 10% of total respondents felt cultured diamonds are taken out of the earth.
 - Respondents who purchased jewelry in the last 5+ years (19%) and respondents ages 18 – 34 (17%) trended most likely of the subgroups to believe this.

Executive Summary (cont.)

No Statistically Significant Difference

- There is no statistically significant difference between the 9% of respondents believing lab-grown diamonds are taken out of the earth and the 10% percent of respondents believing cultured diamonds are taken out of the earth .
- The survey would need least 5,000 respondents per cell to find a statistically significant difference.

Most respondents think synthetic diamonds are fake.

Synthetic:

- More than 50% of total respondents felt a synthetic diamond is an imitation or fake diamond.
 - Respondents ages 55 – 64 (70%) and respondents with \$50,000 - \$99,999 income (68%) trended most likely of the subgroups to believe this.
- Only 18% of total respondents felt a “synthetic diamond” is identical to a mined diamond.
 - Respondents ages 18 – 44 (35% 18 – 34 and 29% 35 – 44), respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (28%), respondents who purchased jewelry in the last 5+ years (26%) and female respondents (22%) trended most likely of the subgroups to believe this.
- When asked what words they would use to describe a synthetic diamond, respondents used the following most often: fake, man-made, cubic zirconia, cheap and artificial.

Advertisement – Cell 1

Lab-Grown Advertisement

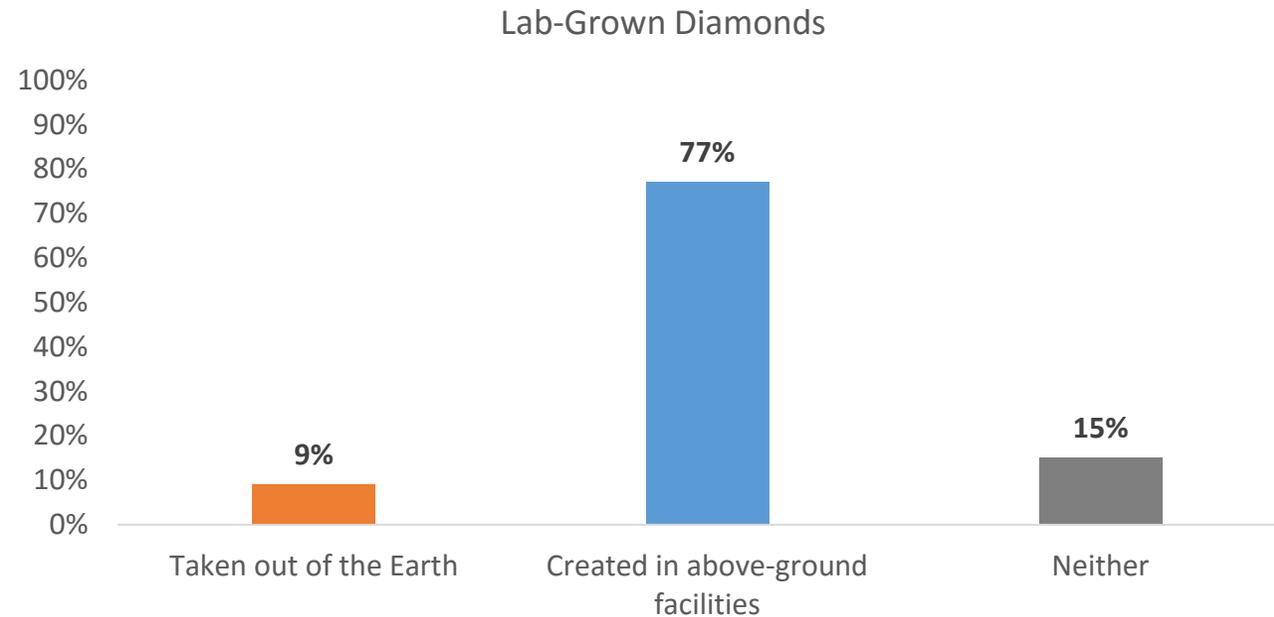


Q9: Which, if any, of the following statements better describes the diamonds in the advertisement?

Detailed Findings – Cell 1

Lab-Grown Advertisement (Total Consumers, n=200)

- 77% of total respondents felt the diamonds in the advertisement are created in above-ground facilities.
- Only 9% of total respondents felt the diamonds are taken out of the earth.



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Detailed Findings – Cell 1

Lab-Grown Advertisement (Sub-Groups)

- Respondents ages 65+ (84%) trended most likely of the subgroups to believe the diamonds are created in above-ground facilities.
- Respondents ages 35 – 44 (18%) trended most likely of the subgroups to believe the diamonds are taken out of the earth.

Q9. Which if any of the following statements better describes the diamonds in the advertisement?

Statements	Gender		Age Group				
	Male	Female	18 – 34	35 – 44	45 – 54	55 – 64	65+
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	N=101	N=99	N=42	N=40	N=40	N=41	N=37
They are diamonds taken out of the earth.	9%	9%	12%	18%	5%	5%	5%
They are diamonds created in above-ground facilities.	76%	77%	79%	68%	75%	78%	84%
Neither of the above.	15%	14%	10%	15%	20%	17%	11%

Stat tested within subgroups AB and CDEFG. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

Detailed Findings – Cell 1

Lab-Grown Advertisement (Sub-Groups cont.)

- Respondents with \$100,000 or more income (91%), respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (86%) and married/civil union respondents (83%) trended most likely of the subgroups to believe the diamonds are created in above-ground facilities.
- Marital Status: Significantly more married/civil union respondents (83%) than never married respondents (62%) felt the diamonds are created in above-ground facilities, while significantly more never married respondents (27%) than married/civil union respondents (10%) felt neither statement describes the diamonds.
- Household Income: Significantly more respondents with \$100,000 or more income (91%) than respondents with less than \$49,999 income (71%) and respondents with \$50,000 - \$99,999 income (75%) felt the diamonds are created in above-ground facilities.
- Jewelry Purchaser Status: Significantly more respondents who have never purchased jewelry (21%) than respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (6%) felt neither statement describes the diamonds.

Q9. Which if any of the following statements better describes the diamonds in the advertisement?

Statements	Marital Status			Household Income			Jewelry Purchaser Status		
	Never Married	Married or Civil Union	Previously Married	Less than \$49,999	\$50,000 to \$99,999	\$100,000 or More	Recent or Future Purchaser*	Purchased Last 5+ Years	Never Purchased
	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)
	N=45	N=111	N=34	N=93	N=60	N=43	N=74	N=31	N=112
They are diamonds taken out of the earth.	11%	7%	12%	11%	10%	5%	9%	13%	7%
They are diamonds created in above-ground facilities.	62%	83% H	71%	71%	75%	91% KL	86%	77%	72%
Neither of the above.	27% I	10%	18%	18%	15%	5%	6%	10%	21% N

Stat tested within subgroups HIJ, KLM and NOP. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

* Includes significant influencers in purchasing decision for diamond jewelry

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Advertisement – Cell 2

Cultured Advertisement

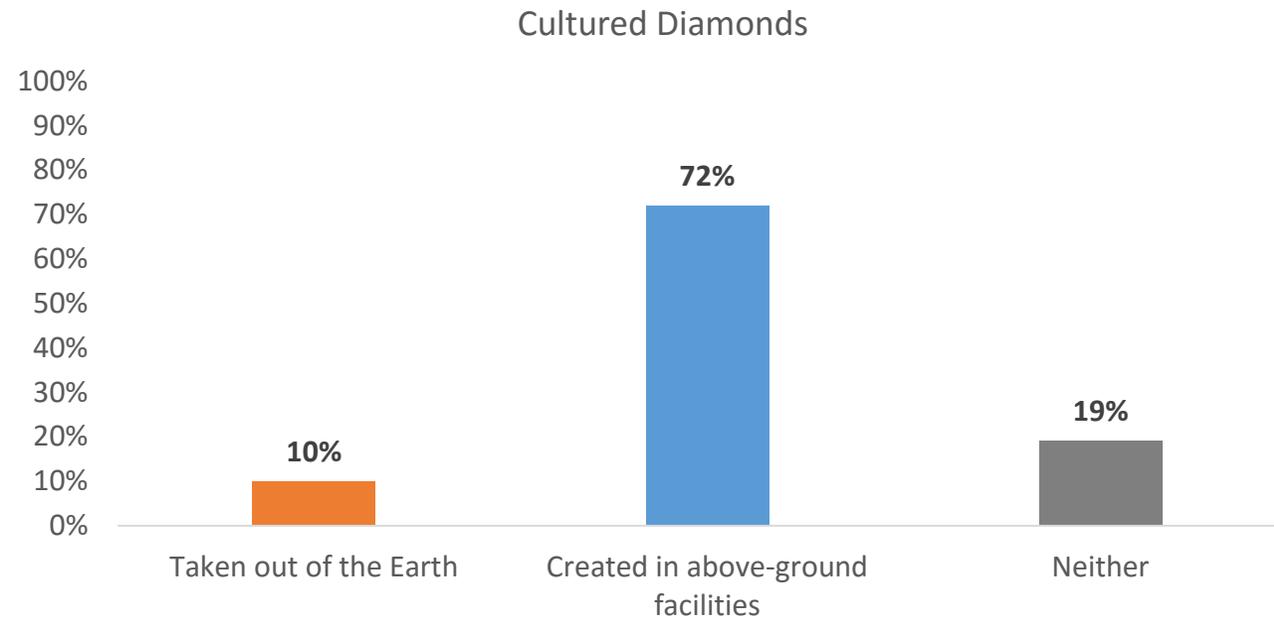


Q9: Which, if any, of the following statements better describes the diamonds in the advertisement?

Detailed Findings – Cell 2

Cultured Advertisement (Total Consumers, n=200)

- 72% of total respondents felt the diamonds in the advertisement are created in above-ground facilities.
- Only 10% of total respondents felt the diamonds are taken out of the earth.



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Q9: Which, if any, of the following statements better describes the diamonds in the advertisement?

Detailed Findings – Cell 2

Cultured Advertisement (Sub-Groups)

- Respondents ages 55 – 65+ (85% 55 – 64 and 80% 65+) and female respondents (79%) trended most likely of the subgroups to believe the diamonds are created in above-ground facilities.
- Respondents ages 18 – 34 (17%) trended most likely of the subgroups to believe the diamonds are taken out of the earth.
- Gender. Significantly more female respondents (79% vs. 64%) felt the diamonds are created in above-ground facilities, while significantly more male respondents (24% vs. 13%) felt neither statement describes the diamonds.

Q9. Which if any of the following statements better describes the diamonds in the advertisement?

Statements	Gender		Age Group				
	Male	Female	18 – 34	35 – 44	45 – 54	55 – 64	65+
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	N=104	N=96	N=35	N=47	N=49	N=34	N=35
They are diamonds taken out of the earth.	12%	8%	17%	15%	8%	6%	3%
They are diamonds created in above-ground facilities.	64%	79% A	66%	66%	65%	85%	80%
Neither of the above.	24% B	13%	17%	19%	27%	9%	17%

Stat tested within subgroups AB and CDEFG. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

Detailed Findings – Cell 2

Cultured Advertisement (Sub-Groups cont.)

- Respondents who purchased jewelry in the last 5+ years (19%) trended most likely of the subgroups to believe the diamonds are taken out of the earth.

Q9. Which if any of the following statements better describes the diamonds in the advertisement?

Statements	Marital Status			Household Income			Jewelry Purchaser Status		
	Never Married	Married or Civil Union	Previously Married	Less than \$49,999	\$50,000 to \$99,999	\$100,000 or More	Recent or Future Purchaser*	Purchased Last 5+ Years	Never Purchased
	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)
	N=59	N=102	N=28	N=92	N=61	N=43	N=59	N=27	N=128
They are diamonds taken out of the earth.	10%	8%	14%	12%	8%	9%	15%	19%	8%
They are diamonds created in above-ground facilities.	75%	72%	68%	73%	69%	72%	71%	63%	70%
Neither of the above.	15%	21%	18%	15%	23%	19%	14%	19%	22%

Stat tested within subgroups HIJ, KLM and NOP. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

* Includes significant influencers in purchasing decision for diamond jewelry

No Advertisement – Cell 3

Synthetic Multiple Choice

Q9: Which, if either, of the following statements better describes a “synthetic diamond” to you?

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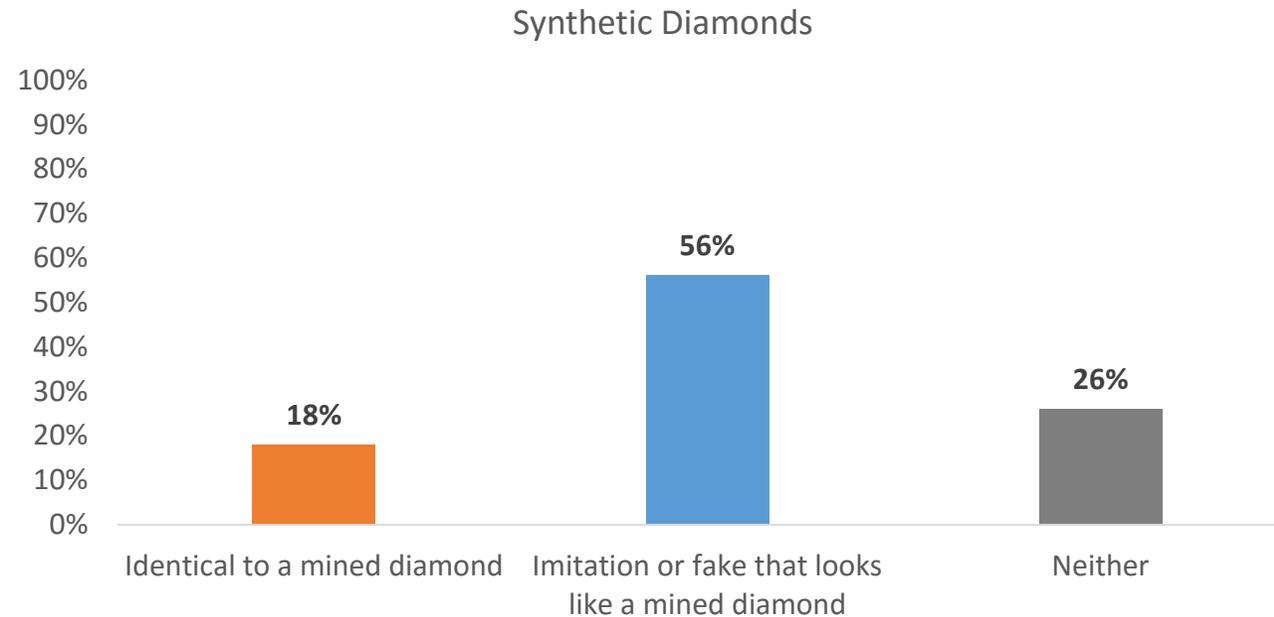
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Detailed Findings – Cell 3

No Advertisement (Synthetic MC) (Total Consumers, n=200)

- 56% of total respondents felt a “synthetic diamond” is an imitation or fake diamond.
- Only 18% of total respondents felt a “synthetic diamond” is identical to a mined diamond.



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Q9: Which, if either, of the following statements better describes a “synthetic diamond” to you?

Detailed Findings – Cell 3

No Advertisement (Synthetic MC) (Sub-Groups)

- Respondents ages 55 – 64 (70%) trended most likely of the subgroups to believe a “synthetic diamond” is an imitation or fake diamond.
- Respondents ages 18 – 44 (35% 18 – 34 and 29% 35 – 44) and female respondents (22%) trended most likely of the subgroups to believe a “synthetic diamond” is identical to a mined diamond.
- Gender: Directionally more female respondents (22% vs. 13%) felt a “synthetic diamond” is identical to a mined diamond.
- Age Group: Significantly more respondents ages 18 – 44 (35%) than respondents ages 45 – 64 (9% 45 – 54 and 6% 55 – 64) felt a “synthetic diamond” is identical to a mined diamond. Directionally more respondents ages 18 – 34 (35%) than respondents 65+ (17%) felt a “synthetic diamond” is identical to a mined diamond. Significantly more respondents ages 35 – 44 (29%) than respondents ages 45 – 64 (9% 45 – 54 and 6% 55 – 64) felt a “synthetic diamond” is identical to a mined diamond.

Q9. Which if either of the following statements better describes a “synthetic diamond” to you?

Statements	Gender		Age Group				
	Male	Female	18 – 34	35 – 44	45 – 54	55 – 64	65+
	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	N=93	N=107	N=26	N=38	N=44	N=33	N=59
It is identical to a mined diamond.	13%	22% ^a	35% ^{EFg}	29% ^{EF}	9%	6%	17%
It is an imitation or fake that looks like a mined diamond.	60%	52%	42%	47%	59%	70%	58%
Neither of the above.	27%	25%	23%	24%	32%	24%	25%

Stat tested within subgroups AB and CDEFG. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

Detailed Findings – Cell 3

No Advertisement (Synthetic MC) (Sub-Groups cont.)

- Respondents with \$50,000 - \$99,999 income (68%) trended most likely of the subgroups to believe a “synthetic diamond” is an imitation or fake diamond.
- Respondents who made a purchase in the past five years or expect to make a purchase in the next five years (28%) and respondents who purchased in the last 5+ years (26%) trended most likely of the subgroups to believe a “synthetic diamond” is identical to a mined diamond.
- Household Income: Directionally more respondents with \$50,000 to \$99,999 income (68%) than respondents with less than \$49,999 income (49%) and respondents with \$100,000 or more income (51%) felt a “synthetic diamond” is an imitation or fake diamond.
- Jewelry Purchaser Status: Significantly more respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (28%) and respondents who purchased jewelry in the last 5+ years (26%) than respondents who never purchased jewelry (11%) felt a “synthetic diamond” is identical to a mined diamond. Directionally more respondents who have never purchased jewelry (32%) than respondents who made a jewelry purchase in the past five years or expect to make a purchase in the next five years (17%) felt neither statement describes a “synthetic diamond”.

Q9. Which if either of the following statements better describes a “synthetic diamond” to you?

Statements	Marital Status			Household Income			Jewelry Purchaser Status		
	Never Married	Married or Civil Union	Previously Married	Less than \$49,999	\$50,000 to \$99,999	\$100,000 or More	Recent or Future Purchaser*	Purchased Last 5+ Years	Never Purchased
	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)
	N=39	N=117	N=32	N=81	N=74	N=43	N=64	N=34	N=118
It is identical to a mined diamond.	15%	19%	19%	20%	15%	19%	28% P	26% P	11%
It is an imitation or fake that looks like a mined diamond.	46%	58%	56%	49%	68% km	51%	55%	53%	57%
Neither of the above.	38%	23%	25%	31%	18%	30%	17%	21%	32% n

Stat tested within subgroups HIJ, KLM and NOP. Letters indicate significant difference at the 95% Confidence Level (uppercase) and 90% CL (lowercase).

* Includes significant influencers in purchasing decision for diamond jewelry

No Advertisement – Cell 4

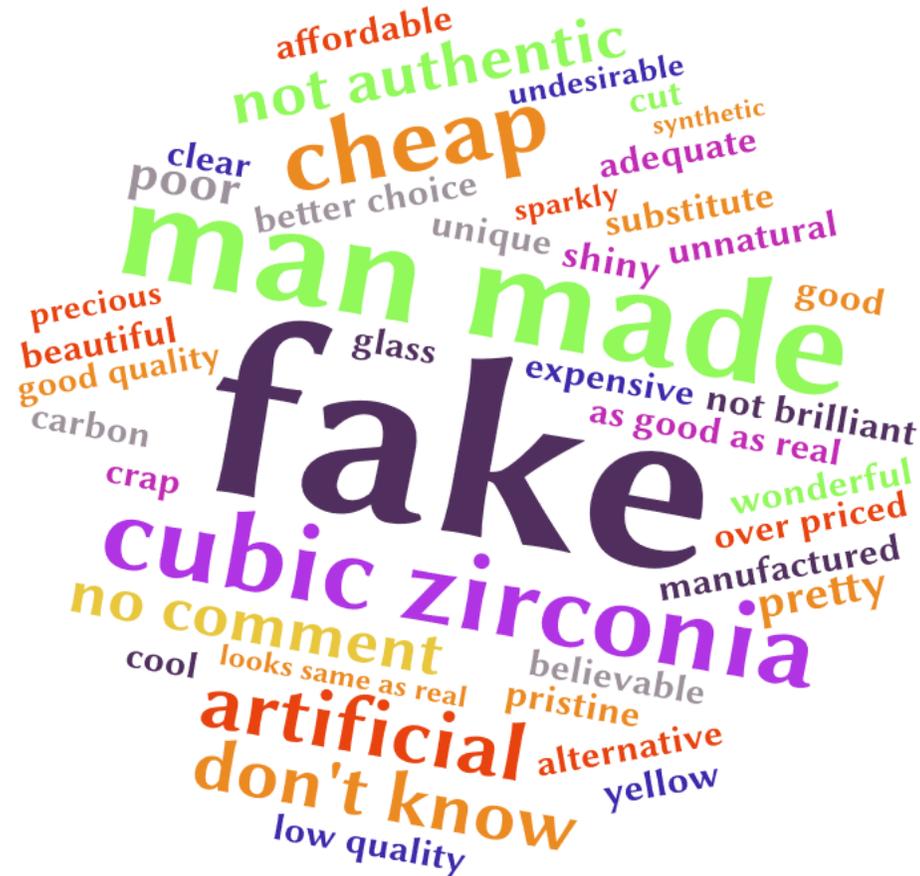
Synthetic Open End

Q9: What word(s) would you use to describe a synthetic diamond?

Word Cloud – Cell 4

No Advertisement (Synthetic Open End) (Total Consumers, n=200)

- The words respondents used most often to describe a “synthetic diamond” are: fake, man-made, cubic zirconia, cheap and artificial.



Demographics

	Cell 1	Cell 2	Cell 3	Cell 4
BASE=	200	200	200	200
Gender				
Male	51%	52%	47%	47%
Female	50%	48%	54%	53%
Age				
18 – 34	21%	18%	13%	23%
35 – 44	20%	24%	19%	16%
45 – 54	20%	25%	22%	25%
55 – 64	21%	17%	17%	23%
65+	19%	18%	30%	14%

Demographics

	Cell 1	Cell 2	Cell 3	Cell 4
BASE=	200	200	200	200
Ethnicity				
White	70%	70%	70%	70%
Hispanic	7%	9%	11%	10%
Black/African American	15%	13%	15%	12%
Asian or Pacific Islander	3%	3%	1%	3%
Native American or Alaskan Native	2%	2%	2%	2%
Other	3%	3%	2%	3%
Decline to answer	1%	2%	1%	2%

Demographics

	Cell 1	Cell 2	Cell 3	Cell 4
BASE=	200	200	200	200
Marital Status				
Never married	23%	30%	20%	27%
Married or civil union	56%	51%	59%	51%
Divorced	10%	10%	10%	11%
Widow/Widower	4%	4%	6%	5%
Separated	3%	1%	1%	3%
Living with partner	5%	6%	6%	4%
Employment Status				
Employed full- or part-time	53%	63%	51%	60%
Not currently employed	9%	13%	10%	12%
Stay-at-home spouse or partner	12%	6%	10%	10%
Retired	25%	17%	30%	19%
Student	2%	3%	1%	1%

Demographics

	Cell 1	Cell 2	Cell 3	Cell 4
BASE=	200	200	200	200
Highest Level of Education				
High School or Less	24%	22%	22%	21%
Some College	32%	31%	31%	25%
College Graduate	32%	31%	34%	39%
Graduate school (MBA, PhD, JD)	13%	17%	14%	16%
Household Income				
Less than \$49,999	47%	46%	41%	46%
\$50,000 to \$99,999	30%	31%	37%	33%
\$100,000 to \$149,999	12%	14%	12%	12%
\$150,000 to \$199,999	6%	4%	6%	6%
\$200,000 to \$249,999	2%	3%	2%	2%
\$250,000 or more	2%	2%	3%	1%
Decline to answer	2%	2%	1%	2%

Demographics

	Cell 1	Cell 2	Cell 3	Cell 4
BASE=	200	200	200	200
Jewelry Purchaser Status (SATA)				
I have purchased diamond jewelry in the last 0-5 years.	26%	21%	24%	27%
I have purchased diamond jewelry in the last 5+ years.	16%	14%	17%	14%
I expect to purchase diamond jewelry in the next 5 years.	19%	15%	14%	16%
I was a significant influencer in the purchasing decision for diamond jewelry.	11%	7%	10%	9%
None of the above.	56%	64%	59%	56%

EXHIBIT C

Consumer Testimonials⁵⁷

I would consider purchasing a diamond that's grown in a lab because at the end of the day, if it does have the same properties, then a diamond's a diamond. So I wouldn't really have an issue with purchasing one that was grown in a lab compared to nature.

– Anthony (San Diego, CA)

I would definitely consider purchasing a lab-grown diamond versus a mined diamond because if they're the exact makeup, chemical makeup, and it's what by definition scientifically a diamond is, then more power to being able to create that versus having to dig into somebody's land and fight over getting diamonds.

– Sarina (Los Angeles, CA)

I would definitely purchase and wear lab-grown diamonds. I wonder if they would be cheaper, but I also understand there have been ethical issue with mining diamonds. And if laboratory diamonds looked and felt the same way as regular diamonds did, I would be completely open to purchasing those diamonds.

– Megan (Dallas, TX)

Yes, I would purchase one because I think that it represents strength. I find the elemental properties of diamonds very intriguing. Even if they weren't natural, if they were lab-grown, they can be very pretty.

– Parker (Franklin, TX)

I would prefer to purchase a lab-grown diamond over a mined diamond since it seems economical in a way. First of all, they're conflict-free, and secondly, they're cheaper, slightly cheaper, and they all look the same.

– Sonom (Los Angeles, CA)

My ring is an angel halo with a half carat stone. My fiancé chose Pure Grown Diamonds because their stones are guaranteed conflict-free and are more affordable than mined diamonds. Plus, having a lab-created diamond makes for an interesting story! We couldn't be happier with how beautiful the ring is!

– Nicole H.

⁵⁷ See Jewelry Consumer News, *Man Made Diamonds Vs. Mined Diamonds* (Sept. 2015); available at: <http://www.jewelryconsumernews.com/video/jewelry-consumer-news-september-2015.php>; <https://www.puregrowndiamonds.com/testimonials/>.

Thank you for educating me on conflict-free diamonds created using your process. Bless you at Pure Grown Diamonds! If only everyone would follow, there would not be any need for mined diamonds as your lab-created diamonds are identical to mined diamonds. Again, THANK YOU!!!!

– Victor C.

Neither of us could be happier with the choice to go with a lab created diamond. As an engineer and a scientist we appreciate what Pure Grown Diamonds has created even more than a traditionally mined diamond. Ultimately, the independent certification from IGI made me more confident dealing with Pure Grown Diamonds (over the internet) than in jewelry stores (in person) and the value was unbeatable.

– Justin H.

I just bought the most beautiful engagement ring from your company. Needless to say, my girlfriend (now fiancée) was shocked at the time I proposed to her by seeing the ring, all her friends are jealous now as you can imagine! You guys helped me with and the excellent service and again, my fiancée LOVES her ring. There is not a single day that she won't thank me for giving her such a beautiful ring. All her coworkers and friends are amazed too! They keep telling her that she has a keeper. It was a great experience dealing with your company. Say hi to Chris for me and thank her for her help!

– Adrian A.

I received a Pure Grown Diamonds Solstice Pendant as part of The Ellen Show's '12 Days of Giveaways' this past December and I wanted to share that I get SO MANY amazing compliments when I wear the necklace – even from strangers! It is a beautiful piece – I LOVE IT!

– Karen C.

I just want to say how blown away I was at how beautiful the ring was! It really was classic, simple, and elegant, and my fiance loved it. When I first started shopping for engagement rings I knew that I did not want a mined diamond because of both the environmental and human rights problems, and I had read that even if someone advertises a Canadian diamond that it would be a possibility that it is not. So after that I knew the only option was Pure Grown Diamonds! Thank you for giving all of us worried about mined diamonds the opportunity to still give our fiance the beauty and timelessness of a diamond. When I gave it to her I explained your company (and that it is a real diamond), and one thing I told her is that I love her enough to buy her a diamond that did not cost anyone their life

– Alex E. (Hilo, HI)

As an attorney who deals with international trade issues, it is obvious to me that “Conflict Free Diamonds” is a dream and not a complete reality. The only way in my view to ensure genuine conflict free diamonds is buying from a company like Pure Grown Diamonds. This was the driving force in my purchase. But, I was very pleased to see that the earrings that arrived were of superb quality meaning that exceeded to some degree, the specifications that were advertised. In other words, even within a range of accurate grading, Pure Grown Diamonds supplied diamonds on the high end of the grading range. Highly communicative, honest assessments. I highly recommend purchasing from them for both personal and social reasons.

– Daniel H (California)

I obtained a fancy color, brilliant yellow man made diamond from Pure Grown Diamonds and it overwhelmed me with the quality and sparkle, even compared to comparable mined diamonds (I did three months of homework, so this wasn't a short process). I had bought the diamond for my soon-to-be fiancée, who is environmentally conscious, as am I, and we didn't want any diamonds that were the result of human suffering or damaging environmental practices. She is in fact in graduate school for environmental studies, all while working a full time job; to say that I'm proud of her is an understatement. Oh, and she takes great care of me and I love her deeply. I was overjoyed when she said yes. Although I gave it to her at Xmas, she still smiles broadly every day when she looks at it (which makes my heart leap), and everyone at her firm compliments her on the ring. Below is a picture of where I gave it to her, it's from the Sea Grille at Rockefeller Center (hint guys – a much better place to give your love a ring without the human crush on Xmas by the Rockefeller tree, in my humble opinion). Also, the above pic doesn't do it justice, it has a fire that just can't be captured by a smartphone camera! I want to personally thank Martin DeRoy of your staff. He was very professional, courteous and rapidly answered my questions. He was instrumental to me choosing the Pure Grown Diamonds diamond. I wanted a Tiffany-style, four-prong, platinum setting (which was a custom order) and he rapidly got me a quote that was thousands less than the competition. It arrived ahead of schedule and was the best Xmas present of all time! So, if you're on the fence, worried about that it will be an inferior product, don't sweat it! This ring is worth double the price I paid (not that it mattered), and it's superior to anything else I saw in my three months of research. So bravo Pure Grown Diamonds and a big thank you to Martin. You should be proud that you have such a committed employee, he is a great ambassador for your firm

– Frank T. (New York City, NY)

To start off, Pure Grown Diamonds Diamond's customer service was the best that I've experienced in a long time. I live in a remote town in Southeast Alaska, and online shopping is pretty normal part of living here. I was little nervous about shopping for an engagement ring online but the staff at Pure Grown Diamonds made me feel very comfortable. The service was even better than the service I had

at the local jewelry store in town. You would think face-to-face business is always better than online or over the phone business, but this was not the case. A customer service person at one of these reputable jewelers told me that they also sell lab-created diamonds by Pure Grown Diamonds. I was nervous about lab-created diamonds at first because I found a “man made diamond” company online that was selling their products as they were real diamond and their big selling point was “conflict free” diamonds. With more investigating, I found out that they were selling “diamond simulants” or “synthetic diamond” which is just a fancy way of marketing Cubic Zirconium with over priced tag. Since a reputable conflict free diamond jeweler suggested Pure Grown Diamonds to me, I decided to check out their website. Let me tell you, looking at the Pure Grown Diamonds website was the start of the end for my two month long engagement ring search! Not only are Pure Grown Diamonds diamonds true conflict free, real diamonds, they are also environmentally responsible. Also, why leave such a huge footprint on this Earth and have people suffer just to find small amount of diamonds when we have the technology to create real diamonds in a controlled environment with minimal footprint and ethical practices? As a society, we all need to wake up! I would recommend Pure Grown Diamonds to anyone out there that’s looking for a beautiful engagement ring. I guarantee you, you won’t be disappointed and neither will your fiancée!

– Teela T. (Sitka, AK)

EXHIBIT D

Diamond Report Comparison

Sample “Mined” Diamond Report

GIA DIAMOND GRADING REPORT	PROPORTIONS	GRADING SCALES																																																
<p>January 01, 2014 GIA Report Number 2141438167 Shape and Cutting Style Round Brilliant Measurements 6.41 - 6.43 x 3.97 mm</p> <p>GRADING RESULTS</p> <p>Carat Weight 1.01 carat Color Grade F Clarity Grade SI1 Cut Grade Excellent</p> <p>ADDITIONAL GRADING INFORMATION</p> <p>Polish Excellent Symmetry Excellent Fluorescence None Inscription(s): GIA 2141438167, <i>I Love You</i> Comments: **SAMPLE**SAMPLE**SAMPLE**SAMPLE**</p>	<p>Profile to actual proportions</p> <p>CLARITY CHARACTERISTICS</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">GIA COLOR SCALE</th> <th style="width: 33%;">GIA CLARITY SCALE</th> <th style="width: 33%;">GIA CUT SCALE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">D</td> <td style="text-align: center;">FLAWLESS</td> <td rowspan="2" style="text-align: center;">EXCELLENT</td> </tr> <tr> <td style="text-align: center;">E</td> <td style="text-align: center;">INTERNALLY FLAWLESS</td> </tr> <tr> <td style="text-align: center;">F</td> <td rowspan="3" style="text-align: center;">VVS₁</td> <td rowspan="3" style="text-align: center;">VERY GOOD</td> </tr> <tr> <td style="text-align: center;">G</td> </tr> <tr> <td style="text-align: center;">H</td> </tr> <tr> <td style="text-align: center;">I</td> <td rowspan="2" style="text-align: center;">VS₁</td> <td rowspan="2" style="text-align: center;">GOOD</td> </tr> <tr> <td style="text-align: center;">J</td> </tr> <tr> <td style="text-align: center;">K</td> <td rowspan="3" style="text-align: center;">SI₁</td> <td rowspan="3" style="text-align: center;">FAIR</td> </tr> <tr> <td style="text-align: center;">L</td> </tr> <tr> <td style="text-align: center;">M</td> </tr> <tr> <td style="text-align: center;">N</td> <td rowspan="2" style="text-align: center;">SI₂</td> <td rowspan="2" style="text-align: center;">POOR</td> </tr> <tr> <td style="text-align: center;">O</td> </tr> <tr> <td style="text-align: center;">P</td> <td style="text-align: center;">I₁</td> </tr> <tr> <td style="text-align: center;">Q</td> <td style="text-align: center;">I₂</td> </tr> <tr> <td style="text-align: center;">R</td> <td style="text-align: center;">I₃</td> </tr> <tr> <td style="text-align: center;">S</td> <td style="text-align: center;">I₄</td> </tr> <tr> <td style="text-align: center;">T</td> <td style="text-align: center;">I₅</td> </tr> <tr> <td style="text-align: center;">U</td> <td style="text-align: center;">I₆</td> </tr> <tr> <td style="text-align: center;">V</td> <td style="text-align: center;">I₇</td> </tr> <tr> <td style="text-align: center;">W</td> <td style="text-align: center;">I₈</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">I₉</td> </tr> <tr> <td style="text-align: center;">Y</td> <td style="text-align: center;">I₁₀</td> </tr> <tr> <td style="text-align: center;">Z</td> <td style="text-align: center;">I₁₁</td> </tr> </tbody> </table>	GIA COLOR SCALE	GIA CLARITY SCALE	GIA CUT SCALE	D	FLAWLESS	EXCELLENT	E	INTERNALLY FLAWLESS	F	VVS ₁	VERY GOOD	G	H	I	VS ₁	GOOD	J	K	SI ₁	FAIR	L	M	N	SI ₂	POOR	O	P	I ₁	Q	I ₂	R	I ₃	S	I ₄	T	I ₅	U	I ₆	V	I ₇	W	I ₈	X	I ₉	Y	I ₁₀	Z	I ₁₁
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Sample “Synthetic” Diamond Report

GIA SYNTHETIC DIAMOND REPORT	ADDITIONAL INFORMATION	GRADING SCALES																												
<p>January 01, 2014 Report Type Grading Report GIA Report Number 2141438191 Identification Laboratory Grown* Shape and Cutting Style Round Brilliant Measurements 6.41 - 6.43 x 3.97 mm</p> <p>Carat Weight 1.01 carat Color Grade Colorless Clarity Grade Slightly Included Cut Grade Excellent</p> <p>Polish Very Good Symmetry Excellent Fluorescence None Inscription(s): GIA 2141438191, LABORATORY GROWN Comments: **SAMPLE**SAMPLE**SAMPLE**SAMPLE** *This is a man-made diamond and has been produced in a laboratory.</p>	<p>PROPORTIONS</p> <p>Profile to actual proportions</p> <p>CLARITY CHARACTERISTICS</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">GIA SYNTHETIC COLOR SCALE</th> <th style="width: 33%;">GIA SYNTHETIC CLARITY SCALE</th> <th style="width: 33%;">GIA CUT SCALE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">COLORLESS</td> <td style="text-align: center;">FLAWLESS</td> <td rowspan="2" style="text-align: center;">EXCELLENT</td> </tr> <tr> <td style="text-align: center;">NEAR COLORLESS</td> <td style="text-align: center;">INTERNALLY FLAWLESS</td> </tr> <tr> <td style="text-align: center;">FAINT</td> <td style="text-align: center;">VERY VERY SLIGHTLY INCLUDED</td> <td rowspan="2" style="text-align: center;">VERY GOOD</td> </tr> <tr> <td style="text-align: center;">VERY LIGHT</td> <td style="text-align: center;">VERY SLIGHTLY INCLUDED</td> </tr> <tr> <td style="text-align: center;">LIGHT</td> <td style="text-align: center;">SLIGHTLY INCLUDED</td> <td rowspan="2" style="text-align: center;">GOOD</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td rowspan="2" style="text-align: center;">FAIR</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> <td rowspan="2" style="text-align: center;">POOR</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;"> </td> </tr> </tbody> </table>	GIA SYNTHETIC COLOR SCALE	GIA SYNTHETIC CLARITY SCALE	GIA CUT SCALE	COLORLESS	FLAWLESS	EXCELLENT	NEAR COLORLESS	INTERNALLY FLAWLESS	FAINT	VERY VERY SLIGHTLY INCLUDED	VERY GOOD	VERY LIGHT	VERY SLIGHTLY INCLUDED	LIGHT	SLIGHTLY INCLUDED	GOOD					FAIR					POOR		
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