Mexican Marks

Bill Lockhart, Beau Schriever, Bill Lindsey, Bob Brown, and Carol Serr

Information on Mexican glass factories and manufacturer's marks has been generally spotty. Mostly, those few researchers who addressed the subject only examined a small part of the picture. This study is an attempt to integrate the existing literature into a single, reasonably comprehensive synthesis of the glass history and manufacturer's marks.

The History of Mexican Glass – Prior to the 20th Century

Rodrigo Espinosa crossed the ocean to form a glass factory on Calle del Venado (Deer St.) at Puebla, New Spain (later Mexico), in 1547. Espinosa's plant was known for its high quality flasks, bottles, and glasses, which it exported as far as Guatemala and Peru. The factory continued in production until sometime between 1712 and 1723. The firm had virtually no competition until Antonio Prado built a factory in the same city. By this time, demand for containers had increased, and both plants were pushed to capacity to fill their orders (Díaz Cruz and Mas Escoto 1952:8-10; López & Martínez 2008).

After an initial attempt at Puebla, Camilo Ávalos Razo opened a small factory in 1889 near La Merced, the best known shopping district in Mexico City. Camilo was the first glassmaker of Mexican origin, and his plant became very successful. His descendants diversified the product line, and one opened a factory at Guadalajara to serve the various tequila plants in the area (López & Martínez 2008). We have not discovered how long any of these works survived.

Much of the glass imported by Mexico prior to the 20th century was from Germany, although the United States became a major exporter to our neighbor by 1910. The main imports from the U.S. were tableware and prescription bottles (*National Glass Budget* 1910a:1). At least as late as 1904, there were "several bottle factories in Mexico, operated by Germans" as well as numerous imports from the Hermann Heye factory in Germany (*National Glass Budget* 1904k:1).

Eleven glass factories were in operation in Mexico as early as 1905. Two of the factories were located in Jalisco with three in Mexico City, two in Pueblo, two in Flaxcola, and one each in Monterrey and the Federal District (outside of Mexico City). The Monterrey plant was "operated by a large brewing company, whose product is sent far and wide into the mining districts and lumber camps, from where the bottles rarely ever come back, the miner and lumbermen finding excellent use for them in their huts and cabins" (*National Glass Budget* 1910a:1). Unfortunately, none of the pre-20th century plants seem to have been named. Other factories were in production in Puebla and Mexico City prior to 1900, but information is scanty. During the early 20th century, Vidriera Monterey was the only major glass house in the country.

History of Vidriera Monterrey and Other 20th Century Glass Houses

All information below was taken from Vitro (2002; 2003; 2009) unless otherwise cited. See Table 1 at the end of this section for a list of Mexican glass houses.

Francisco G. Sada Muguerza and his brother-in-law, Isaac Garza Garza (along with other family members), founded the Cuauhtemoc brewery in Monterrey in 1890.¹ With a hundred thousand pesos in capital, the firm began with only two administrators and 70 workers – with the office in a grocery store. The first brand was Carta Blanca, a brew that continues to be a favorite in 2021 (*National Glass Budget* 1910b:1; FEMSA n.d.).

In order to bottle their beer without importing containers, Garza established Vidrios y Cristales, S.A., on October 20, 1899.² Despite importing glass blowers, technical difficulties caused an almost immediate shut down of the plant, it soon reopend and began production in 1903. In 1909, the company became Vidriera Monterrey, S.A., when it acquired the license for the Owens Automatic Bottle Machine (FEMSA n.d.; FundingUniverse 2008). The company was scheduled to install three Owens automatic bottle machines sometime after April 1910 (*National Glass Budget* 1910b:1). Vidriera Monterrey established itself as a separate entity in 1911

¹ According to FEMSA (n.d.), the firm was founded by an "enthusiastic group of entrepreneurs headed by Don Isaac Garza, José Calderón, José A. Muguerza, Francisco G. Muguerza, Francisco G. Sada, y Joseph M. Sada, Joseph M. Schnaider."

² The abbreviation "S.A." in Spanish is roughly equivalent to "Inc." in English.

(FundingUniverse 2008). Hampered by the Mexican Revolution, the company faced difficulties in its early years. However, by the end of 1915, Vidriera "began operating on a small scale again, with only one productive unit." Mexico's economy had improved by 1918, and Vidriera paid its first 6% dividend to its shareholders.

This revolutionary period in Mexico's history created an unusual situation for the burgeoning brewery and bottle industries. Although the brewery continued production, bottle manufacture virtually ceased – probably because of revolutionary raid or fear of them. It is also possible that many blowers and other workers joined the ranks of the revolutionaries. Not only did the revolution continually disrupt the Monterrey plant, the Owens Bottle Machine Co. was recovering from the 1903 and 1907 recessions and a series of strikes, creating a shortage of parts for Owens machines. This lack of support from the U.S. combined with local revolutionary disruptions virtually crippled the Mexican bottle industry.

Meanwhile, the Owens machines were creating strife north of the border. U.S. glass houses, especially those producing beer bottles, were understandably concerned that the Owens machine exclusive license to the Ohio Bottle Co. would give that firm a virtual monopoly over the brewery container industry. Mexico provided a convenient outlet for the machine-made bottles, and both the Ohio Bottle Co. and its successor, the American Bottle Co., sold the entire production of machine-made beer bottles to Mexico. So, during the period between 1904 and ca. 1914, Mexican breweries enjoyed a higher quality of bottles – machine made – that the mouth-blown containers that continued in use in the United States. For more information about the Ohio and American Bottle Companies, see the section on the American Bottle Co.

In 1928, a flat glass company, Vidrio Plano, was begun in Monterrey. Another glass company, Vidriera Mexico, S.A. was built in Mexico City in 1934 "to satisfy increasing demand for glass containers in central and southern Mexico." The following year, Vidriera began exporting "glass bottles, glassware, and flat glass to Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama." In 1936, four companies (Vidreiera Monterrey, S.A., Cristaleria, S.A., Vidrio Plano, S.A., and Vidriera Mexico, S.A.) combined to form Fomento de Industria y Comercio, S.A. (FIC). The growing organization began to expand, acquiring Vidriera Los Reyes, S.A. in 1944; Vidriera Guadalajara, S.A. in 1951; and establishing Vidrio Plano de Mexico in 1965 to manufacture "flat glass in 2 and 3 mm widths."

In 1957, FIC acquired Cristales Mexicanos, S.A., "a large producer of dinnerware and glassware in Monterrey, Mexico." The group branched out into other countries in Central and South America in the 1960s. In 1968, Vidrio Plano de Mexico (flat glass) began its first float glass production line – "a revolutionary process that increases production and improves quality." A decade later (1979), FIC changed its name to Vitro, S.A.

In 1985, Vitro created "a company in the United States with offices in Dallas, Texas, named Fomexport, Inc., now Vitro Packaging, Inc., to serve glass container consumers and attend to distribution issues the United States." Another combination with Whirlpool Corp. in 1987 created Vitromatic, S.A. de C.V., and Mexico's seventh glass container factory, "Vidriera Mexicalli, S.A., opened in 1992.

Individual factories, however, may have retained their own identities. In 1985, 20 factories were listed for Mexico, at least six of which had been operating in 1956 (see above). Vidriera Monterrey made containers at ten day tanks with 29 I.S. machines (i.e., Individual Section machines) in 1985 (Perrine 1985:34).

The group branched out into the production of "aluminum cans for the beverage industry" in 1994 by starting Vitro American National Can, S.A., a joint venture with Pechiney International (currently Rexam). In 1998, Vitro, S.A. again change its name to Vitro S.A. de C.V. Vitro's subsidiaries now have facilities and distribution centers in seven countries, located in North, Central, and South America as well as Europe, and the firm exports to more than 70 countries worldwide.

By 1985, many of these factories maintained their own identities through all of the reorganizations and merges. Vidriera Mexico, S.A., remained in business, making a large variety of bottles that included "aerosols; cosmetics; drug & pharmaceutical; perfume; one-way & returnable beer & beverage; food; juice; liquor; milk' mineral water; wine; ink bottles" (Perrine 1985:32). Vidriera Monterrey, S.A., operated ten furnaces to supply 29 I.S. machines, making containers (Perrine 1985:33). Vidrio Plano, S.A., also retained its identity, continuing to manufacture various types of flat glass, along with Vidrio Plano de Mexico, S.A., an apparent branch in Mexico City (Perrine 1985:48).

Table 1 – Mexican Glass Plants

Dates	Factory	Location	Products
1909-2021+	Vidriera Monterrey	Monterrey, NL	Bottles
1928-1936	Vidrio Plano	Monterrey, NL	Flat Glass
1934-2021+	Vidriera Mexico*	Mexico DF	Bottles
1936-1946	Cristalería**	Monterrey, NL	Tableware
1936-1979	Formation of Fomento de Industria y Comercio (FIC)	Various Locations	All Glassware
ca. 1936 2021+	Fábrica Nacional de Vidrio	Tultitlan, Hidalgo	Bottles
ca. 1936-2021+	Vidriera Los Reyes	México, DF	Bottles
1946-ca. 1985	Cristales Mexicanos	Monterrey, NL	Tableware
1946-2021+	Vidriera de Guadalajara	Guadalajara, Jalisco	Bottles
1940s-?	Vidriera de Puebla	Puebla, Puebla	Bottles
1940s-?	Vidriera del Centro	Unknown	Bottles
1948-1970s?	Cervecería Moctezuma	Orizaba, Veracruz	Beer Bottles
1928-1985+	Vidrio Plano de Mexico	Flat Glass	
1979	FIC became Vitro		
1960s-1985	Vitrocrisa Crimesa	Monterrey, NL	Tableware
?	Fábrica de Vidrio de Texcoco	Texcoco, Toluca	Unknown
1980s-late 1990s	Vidriera Oriental	México, DF	Bottles
1981-2019	Nueva Fábrica Nac. de Vidrio	México, DF	Bottles
1992-2021+	Vidriera Mexicali	Mexicali, BC	
ca. 1990-2021+	Vidriera Querétaro	Querétaro, Querétaro	Bottles

^{*} possibly Fábrica Nacional de Vidrio

^{**} later Vitro Crisa

By 2000, there were 18 glass factories in Mexico that made either glass containers or glass bottles. Silices de Veracruz, S.A. de C.V.,³ made "beer bottles in amber, flint and green. Soft drink bottles in flint" (National Glass Budget 2000:43-46). Although Vitro accepted an offer from the Owens-Illinois Glass Co. to buy the firm's glass division on May 13, 2015, the final sale was not completed until an announcement on September 1. Vitro continued to make containers for "Cosmetics, Fragrances, and Pharmaceutical, as well as in the Flat Glass segments including Automotive and Construction, as well as business-related with chemicals through Industria del Alcali and manufacturing molds and machinery through Fabricacion de Maquinas." But, the century-long soda and beer bottle production of Vidriera Monterrey-Vitro – the very bottles that initially powered the production – as a Mexican firm had ended – although Owens-Illinois continued to operate the same factories.

Other Plants

A few other glass plants evolved outside the Vitro combine, and we present very limited histories of those below.

Nueva Fábrica Nacionale de Vidrio, S.A. de C.V., Tultitlan, Hidalgo

Nueva Fábrica Nacionale de Vidrio, S.A. de C.V., was formed ca. 1936 and remains in business at Vía José López Portillo No. 7. Tultitlan, Hidalgo – as of this writing in 2021. By at least 2009 (probably much earlier), the plant was affiliated with Vitro.

Containers and Marks

Since this section is a bit different – dealing with the glass logos from a country instead of a single firm or group of companies – we will use an alternative format for our presentation. The evidence indicates that Mexican glass houses continuously used the same mark until the firm ceased operations or became part of a larger combine – unlike the U.S., where a single glass operation could go through five or six logo variations in a 50 year period. As a result, we will present these Mexican logos in the order that they probably appeared, chronologically. For

³ Sociedad Anonima de Capital Variable or incorporated with variable capital.

example, Vidriera Monterrey was Mexico's oldest 20th century firm, so we will discuss its logo first. Since most of the Mexican glass companies begin with the letter V (usually Vidrio), this format will probably work better than an alphabetical listing. See Table 2 at the end of this section for a list of logos and the firms that used them.

Vidriera Monterrey – VM monogram in a circle (ca. 1936-ca. 1985)

Fontana (1968:47-49) illustrated and discussed the Circle-VM mark (Figure 1). All of his illustrations showed curves on the "legs" of both the "V" and the "M" and, in many cases, showed the points of the letters touching the surrounding circle. Many of the marks were accompanied by a single-digit numeral (with or without dots) above and a single-digit numeral below the mark. These are certainly the arm and mold numbers discussed by Munsey (below). None of the marks included a decipherable date



Figure 1 – Circle-VM

code. Fontana identified the mark as used by Vidriera Monterrey "since 1909" on prescription, liquor, packer, beer, soda, and ink bottles. Bottles in Fontana's study ranged from undetermined

dates earlier than the mid-1930s to at least the mid-1950s based on bottles with marks and date codes from the Owens-Illinois Glass Co. Thus, the study provided no clear time frame for the Circle-VM dates. The 1909 date was for the establishment of the factory.

Berge (1980:84) presented a table where he cited Owens-Illinois (1964 – a card with various company trademarks and tables) which contained four Mexican glass manufacturer's marks

(Figure 2). Along with the well-known V-and-M-in-a-circle



Figure 2 – Mexican Logos (Berge 1980:84)

(which he identified as Cartel Vidriera Monterrey), he showed M in a circle (Cristales Mexicanos Mexico). Toulouse (1971:593) noted that the plant was in Monterrey, likely getting his information from Berge or from the same Owens-Illinois chart. Berge also included M in a triangle (Cartel Vidriera Mexico). Toulouse (1971:593) drew this as a volcano with a flame extending above it (or a lamp of sorts). The simple "M" is more likely correct. Berge's final logo was what appears to be a CW monogram in a circle (Cartel Vidriera Guadalajara Mexico).

Toulouse (1971:593) illustrated this as a wide "W" with an inverted "L" rising from the left leg. It is clear from Emhart (see below) that the Circle-VM mark was still in use in 1982 but had ceased by 1996.

An unusual application of this mark (at least by U.S. standards) was its placement on milk bottles. One of the 120 boxes of milk bottles in the California State Park collection (examined by the BRG in 2006) contained Mexican milk



Figure 3 – Circle-VM milk (Cal. Parks)

bottles. These were consistently marked with two different logos, all embossed in circular plates on the shoulders of the bottles (Figure 3). These marks were very large compared to most marks, including other examples of the Circle-VM logo. The plates were ca. one inch in diameter. The Circle-VM mark was the most common.

Vidriera Mexico – M in a Triangle (ca. 1936-ca. 1985)

Munsey (1997:5-6) showed and discussed the VM-in-a-triangle mark and its accompanying numbers. The manufacturer was Vidriera Monterrey. He claimed that the "6" and "1" were arm and mold numbers, and the "45" was the date code. A colorless, fifth liquor bottle with the Federal Law warning and an Owens scar had a stippled base embossed 58 / VM in a triangle / 4, a similar configuration to the Munsey bottle. We also observed a globular-shaped bottle with a long neck and continuous-thread finish in an unproveninced collection at Fort Stanton, New

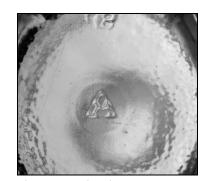


Figure 4 – Triangle-VM

Mexico. The front was embossed "LA MADRILEÑA / MEXICO" with the Triangle-VM mark on the base above "60" – presumably a date code for 1960. A final base had "78" above the logo and "4" below it (Figure 4).

McDougald and McDougald (1990:160-161) noted that both the V atop an M in a triangle mark and a more-common VM monogram in a circle were marks of Vidrieria Monterrey, Mexico. They suggest that the older triangle mark was replaced by the circle mark in the mid-1950s. The triangle mark also accompanied the FFCCN de M mark of

the Ferrocarriles Nacionales de Mexico on signal insulators. The circle mark was often present with the ERICSSON telephone insulator commissioned by a Swedish telephone supply house.

Although Munsey (1997:5-6) and the McDougalds (1990:160-161) assigned the Triangle-VM logo to Vidriera Monterrey, they did not explain their reasons for the selection, and the mark did not show up in any of the logo charts. Both claimed that the Triangle-VM was used prior to the Circle-VM. Berge (1980:84), however, illustrated an M-in-a-Triangle mark from the 1964 Owens-Illinois Glass Co. chart that belonged to Vidriera Mexico (see Figure 2). Although the logo failed to show up on the Emhart 1982 punt mark catalog, the booklet only showed three logos from Mexico – even though more certainly existed.

As noted above, and in support of Berge, our sample of bases with the logo formerly called Triangle-VM included date codes of 45, 58, 60, and 78 – indicating a use of the mark from at least 1945 to at least 1978 on liquor, beer, and soda bottles. Assuming Berge is correct, the Vidriera Mexico plant was erected in 1934, creating a beginning date for the MV in a triangle mark. In agreement with Berge, we suggest that the logo is actually Triangle-M, used by Vidriera Mexico from its inception in 1934 to ca. 1985, when Vitro adopted the check marks (see below). While the difference between the "V" and "VM" is not obvious in any description, the shape of the triangle with the notch of the "M" creates an impression of a "V" that does not exist – see Figure 4.

Vidriera Los Reyes – VR in a circle (ca. 1936-ca. 2005)

Although we have found no information listed anywhere about this mark, we have observed it on very recent (1990s) bottles as well as earlier ones, beginning at least as early as 1989 (Figure 5). A reproduction of the Christmas Coke bottle (see Porter 1996:8) was embossed with the Circle-VR mark. Also made by numerous U.S. glass houses, these bottles were introduced in 1989 and apparently only made during that year. The most likely company is Vidriera los Reyes, Tlalnepantla, Mexico (a suburb of Mexico City), opened ca. 1936. Absorbed by Vitro in 1944, the factory retained its own identity to at least 2005.

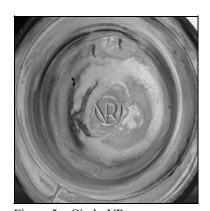


Figure 5 – Circle-VR

Cristales Mexicanos & Vitrocrisa Crimesa – Circle-M (ca. 1946-ca. 1985)

Fontana (1968:47-49) suggested that "Cristales Mexicanos, a bottle-making plant begun in Monterrey in 1946 . . . their mark in 1964 was a fully-circled 'M'" (see Figure 2) Since "Cristales" means "Crystal," Cristales Mexicanos almost certainly made fine tableware – not bottles. The firm began in 1936 as Cristalería at Monterrey, Nuevo Leon. By 1946, the name had changed to Cristales Mexicanos, and the plant became Vitrocrisa Crimesa during the 1960s, continuing in production until at least 1985. We have not seen an example of this mark – not surprisingly since we specialize in bottle logos.

Vidriera Guadalajara – VG in a Circle (ca. 1946-ca. 1985)

Fontana (1968:47-49) also showed a VC monogram in a circle (with an angular, stylized "C"), a mark he identified as being from either: a) Vidriera de Centro, "a Mexican bottlemaking plant which came into existence because of the increased demand for bottles brought about by the advent of World War II"; or b) Vidriera de Guadalajara (if the "C" were actually a "G"), founded in 1946.

IEXICO	
Guadalajara, S.A.,Vidriera Guadalajara, Jalisco	©
Monterrey, Vidriera S.A. Monterrey, Neuvo Leon	*
Vitrocrisa Crimesa S.A. Monterrey, Nouvo Leon	W

Figure 6 – Mexican Logos (Emhart 1982:50)

The 1964 table offered by Berge (1980:8) illustrated the mark as looking more like a squared "C" superimposed on a "W" in a circle – and Emhart (1982:50) showed the same logo (Figure 6). Despite the drawings, the actual mark distinctly exhibited a "V" and an angular "G" surrounded by the circle. Like the Circle-VM mark (see above),

the Circle-VG mark was recorded on the shoulders of milk bottles at the California State Park collection (Figure 7). By Emhart (1996:34), the logo had become a checkmark with the dot indicating the plant to the lower right of the check (see below for a discussion of the check marks). Vidriera Guadalajara may have used the mark as early as 1946 and it was certainly still embossed on bottles until the major logo change ca. 1985.



Figure 7 – Circle-VG

Cerveceria Moctezuma – Circle-CM and M-in-C (1948-1960s or later)

Cerveceria Moctezuma, S.A., was a large brewery in Orizaba, Vera Cruz. The cerveceria built its own bottle factory in 1948 and commenced production in September. Two Lynch Model 10 machines were "automatically fed by two T.E.CO. Oil fired automatic glass gob feeders." The plant made amber beer bottles (Carnes 1949:262-264). In 1985, the factory had three 340-ton tanks, working seven I.S. machines to make "amber glass containers for beverages" (Perrine 1985:32). Its original beer was Carta Blanca, although it introduced several other brands including Dos Equis and Tecate.

M-in-C (ca. mid-1950s-1960s or later)

Fontana (1968:47-49) illustrated an "M" surrounded by a "C," a mark he suggested may have been used by either of two companies: 1) "Cristales Mexicanos, a bottle-making plant [actually tableware] begun in Monterrey in 1946, although their mark in 1964 was a fully-circled 'M'"; or 2) Cerveceria Moctezuma of Orizaba, Vera Cruz, a "firm more involved in making beer bottles" in 1948. An example in our possession had the M-in-C logo on an ACL soda bottle probably made during the 1940-1960 period (Figure 8). The M-in-C mark may have been used from the mid-1950s to the 1960s or later.



Figure 8 – M-in-C

Circle-CM (1948-ca. mid-1950s)

We had an amber, machine-made whiskey fifth with a base embossed in a CM monogram in a circle with 49 to the right and 3 below it (Figure 9). The mark almost certainly belonged to Cerveceria Moctezuma. This was probably the earlier of the two logos. Since Cerveceria Moctezuma opened in 1948, and our example was made in 1949, the Circle-CM logo was almost certainly the earliest one. It may have only been used until the mid-1950s.



Figure 9 – Circle-CM

Vidriera Oriental – Circle-V (ca. 1980s-late 1990s)

The 1996 Punt Marks booklet from Emhart (1996:35) showed the logo as belonging to Vidriera Oriental of Mexico City (Figure 10). Our only example was on an amber, embossed Barq's soda bottle with a base embossed "9



Figure 10 – Circle-V (Emhart 1996:35)

Circle-V 88 (or 8B)" (Figure 11). The type of base stippling was not used until the 1970s. Neither the firm nor the mark were listed in Emhart (1982:50) and Emhart (2000:18-19).

Vidriera Oriental, S.A. was in business by at least 1985, making containers in amber, flint and Georgia Green on eight I.S. machines (Perrine 1985:35), although no marks were listed in 1982 (Emhart 1982:50). Vitro acquired Vidriera Oriental in the early 1990s. On March 10, 2000, Vitro announced that it would close Vidriera Oriental. The factory made soda bottles, and glass container sales to the soda industry had dropped 20% due to the use of plastic bottles (Glass Online 2000). Assuming the "88" on the Barq's base was a date code for 1988, the firm used the Circle-V logo prior to its sale to Vitro.



Figure 11 – Circle-V (Andrew Vorsanger)

FA / NAL in a Circle (ca. 1940s-ca. 1960s)

We examined a colorless soda or beer bottle with a crown finish embossed on the base with "FA / NAL" in a circle above "10" (Figure 12). We discovered another example in the collection at Fort Stanton, New Mexico. It was an amber non-returnable beer bottle in a shape not used prior to the 1960s. The finish was a modified crown with no reinforcing ring. The base was embossed



Figure 12 – FANAL

"NO REQUIRE DEPOSITO" around the heel and "ESTA BOTELLA SE USA UNA SOLA VEZ" around the outside of the base, with "5 10 / MOCTEZUMA / {FA / JAL in a circle}" (Figure 13). Cerveceria Moctezuma was the brewery that used the bottle. Although the firm also made its own beer bottles, it also needed more than it could produce – therefore, the name on the base indicates the user rather than the manufacturer.

Our final example was a colorless milk bottle with the "FA / NAL" in a circle – with the look of a bottle made during the 1940s, possibly into the 1960s. Nueva Fábrica Nacionale de Vidrio incorporated on April 30, 1981, producing at least milk and beer bottles, the latter mostly for Grupo Modelo (Corona, Modelo Especial and Pacifico). The Owens-Illinois Glass Co. acquired Nueva Fanal on July 2, 2019 (Efirma n.d.; NS Packaging 2019). We have found no indication that Owens-Illinois continued using the old logo, so it probably switched to its own mark.



Figure 13 – FANAL

Recent Mexican Punt Marks

By 1996, the Mexican marks had changed dramatically. Emhart (1996:34-35) showed that six factories belonged to a single conglomerate (Vitro), all marked with an embossed "V" in the shape of a check mark ($\sqrt{\ }$). The position of accompanying dots (or a Circle M in one case) indicated individual factories:

Vidriera Guadalajara, S.A. (Guadalajara, Jalisco) – dot to lower right Vidriera Los Reyes, S.A. (Tlainepantla, Edo de Mexico) – dot to center right Vidriera México, S.A. (Cd. de México, D.F.) – dot to upper right Vidriera Monterrey, S.A. (Monterrey, Nuevo Leon) – dot above Vidriera Querétaro, S.A. (Querétaro) – dot below Vitrocrisa, S.A. (Monterrey, Nuevo Leon) – Circle M to right (sans serif)

In addition Vidriera Mexicali, S.A. (Mexicali) and Vidriera Toluca, S.A., (Toluca) were listed with no marks to identify their products. Finally, Vidriera Oriental, S.A. (México D.F.) used a Circle-V mark (with distinct serifs) (Emhart 1996:34-35).

A further rearrangement by 2000 (Emhart 2000:18-19; 2004) eliminated Vitrocrisa but added:

Vidriera Toluca, S.A. (Toluca) – dot to lower left Vidriera Mexicali, S.A. (Mexicali) – dot to center left Four other factories had different marks (Emhart 2000:18-19; 2004):

Fábrica de Envases de Vidrio, S.A. (San Felipe, Mexicali) – FV monogram superimposed on five bottles in a row

Nueva Fábrica Nacionale de Vidrio, S.A. (Tuititlan) – NF monogram Sílices de Veracruz, S.A. (Orizaba) – Circle S

Vidrio Formas, S.A. (Lerma) – Inverted triangle divided horizontally by a line (actually a stylized "F" superimposed over a "V")

With the exception of the check mark (see below), our only example of any of these logos was "1816 / 73 / NF-in-a-hexagon" on the base of a colorless soda bottle with a crown finish (Figure 14). Assuming that the "73" was a date code, the logo was used at least as early as 1973. The stippling on the resting point was typical of a 1970s era base. Nueva Fábrica Nacionale de Vidrio, S.A. de C.V. remained open until at least 2014 at Vía José López Portillo No. 7. Tultitlan, Hidalgo, Mexico. The firm either changed its name at some point after 2014 or just became known as Nueva Fanal, S.A. de C.V., an affiliate of Grupo Modelo. Despite the base with "MOCTEZUMA" Nueva Fanal produced the bulk of its bottles for Grupo Modelo. Owens-Illinois acquired Nueva Fanal on July2, 2019 (NS Packaging 2019).

Check Marks

Between 1982 and 1996, all Mexican plants (except Vidriera Oriental) adopted a check mark (almost certainly a stylized V) with a dot in various places to identify the plant (Figure 15). An exception, Vitrocrisa in Monterrey, had a Circle-M to the right of the check mark.



Figure 14 – Hex-NF



Figure 15 – Mexican Logos (Emhart 1996:34-35)

The most likely year for the change of mark was 1985, the year that Vitro opened an export and packing house in Dallas, Texas, to facilitate shipping of bottles into the U.S. The

firm may have wanted to distance itself from the older logos that were associated with a period when Mexican glass products were less durable than their U.S. counterparts (e.g., see Lockhart 2010, Chapter 9).

The check mark came in two different forms. One form – almost certainly the earliest was an embossed check mark, and the mark was



Figure 16 – Check Mark (positive)

likely used between 1985 and ca. 1995, possibly as late as 2000 (Figure 16). Our only examples included:

- .7 √ dot above 25 [Monterrey]
- .5 $\sqrt{\text{dot below 35 [Querétaro] parentheses stippling}^4}$
- .0 √ dot below 15 [Querétaro] parentheses stippling
- 5 √ dot lower right 21 [Guadalajara] parentheses stippling
- 21 $\sqrt{}$ dot lower left 4 [Toluca (2000)] parentheses stippling on resting point; dot stippling rest of base

The second form had a line at the top with a triangle drooping from the center above two other triangles. These formed a square with a negative space in between, and that negative space created the check mark – probably used between 1995 and 2015 (Figure 17). Our examples include:



Figure 17 – Check Mark (negative)

- 6. $\sqrt{}$ dot right 5 [Mexico City] unknown stippling; logo on side of Coca-Cola bottle
- 12 $\sqrt{\ }$ dot above 20 [Monterrey] three rows of dot stippling
- $6\sqrt{2}$ no dots [location unknown] parentheses stippling

 $6\sqrt{6}$ no dots [location unknown] parentheses stippling

 $6\sqrt{\text{dot lower left 2 [Toluca (2000)] parentheses stippling}}$

6 √ dot right 14 [Mexico City] parentheses stippling

.13 $\sqrt{}$ dot right 9 [Mexico City] parentheses stippling; logo on heel

Although the Owens-Illinois Glass Co. purchased the beverage container part of Vitro in 2015 and the remainder of the company at some point thereafter, the U.S. firm continued to use the same negative-space checkmark logos as Vitro.

At this point, we do not fully understand the codes. The numbers to the right are certainly *not* date codes, but the left ones could be. However, based on our small sample, we can create several hypotheses.

Positive Checkmark Codes:

The left number with no dot equals 1980s.

The left number preceded by a dot equals 1990s.

On the Toluca base, 21 may equal 2001 or the numbers may be reversed; 4 may be the date.

Negative-Space Checkmark Codes:

Single-digit numbers to the left equal 2001-2010.

Double-digit numbers to the left equal 2011-2015.

Of course, we need a much larger sample to test these hypotheses, or some documentation may appear to provide further evidence.

Discussion and Conclusions

Most of the study is self-explanatory. The early history of Mexican glass – prior to the 20^{th} century – has little relevance to our focus on manufacturer's marks because the first Mexican factories to adopt logos did not do so before ca. 1936. Therefore, our concentration has been on the final two thirds of the 20^{th} century.

Table 2 – Logos and Factories (ca. 1930s-ca. 1985)

Factory	Logo	Dates of Use
Vidriera Monterrey	Circle-VM	ca. 1936-ca. 1985
Vidriera Mexico	Triangle-M	ca. 1936-ca. 1985
Vidriera Los Reyes	Circle-VR	ca. 1936-ca. 1985
Cristales Mexicanos	Circle-M	1964 list
Vitrocrisa Crimesa	Circle-M	1982 list
Vidriera de Guadalajara	VG monogram in circle	ca. 1944-ca 1985
Cervecería Moctezuma	Circle-CM	ca. 1948-mid-1950s
Cervecería Moctezuma	M in a C	ca. mid-1950s-1970s?
Nueva Fábrica Nacionale de Vidrio	FA/NAL in a circle	ca. 1940s-ca. 1960s
Vidriera Oriental	Circle-V	ca. 1980s

After several false starts, Vidriera Monterrey opened in 1909 and became the most successful Mexican glass house. The plant remained the focal point when it merged with three others to form the Fomento de Industria y Comercio, S.A. (FIC) in 1936, and all of those factories probably adopted manufacturer's marks in the year of the mergers. At first, all of these used unrelated logos, but the firm (now called Vitro) standardized its marks ca. 1985 – using a check mark figure that remains the company standard in the 21st century. Several other Mexican glass houses also adopted logos, and these had various designs as noted in the text above.

Most of the dating of the marks is approximate. We have few solid dates except when we know the actual closing of a plant. Hopefully, future research will uncover some documentary evidence for beginning and end dates, both for firms and for logos.

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