Market evolution: Flavor and fragrance mixtures (CN 3302) — 2015–2025

Introduction

The product group CN 3302 covers mixtures of odoriferous substances used as raw materials in industry, including alcoholic solutions, as well as preparations for beverage manufacturing. It is a bundling heading that brings together two sub-segments: food- and drink-industry mixtures (3302 10) and industrial raw-material mixtures excluding food/drink (3302 90). This report analyses the evolution of European Union (EU) trade with non-EU partners over the period 2015-2025, drawing on annual data from the EU Trade Dashboard. It highlights the main dynamics in trade values, volumes, prices, partner concentration, member state specialisation and product composition.

Export-led growth after a deep pandemic shock

The EU’s trade in flavour and fragrance mixtures expanded substantially over the decade, with exports driving the surplus to a new high and recovering vigorously after the 2020 contraction.

EU exports of CN 3302 surged by 49.7 % in value between 2015 and 2025, while the trade surplus grew by 53.4 %

Overall trade figures show a continuous upward trend, interrupted only by the pandemic year.

Indicator	2015	2025	Change (%)
Exports (million EUR)	7 745	11 595	+49.7
Imports (million EUR)	1 784	2 452	+37.4
Trade balance (million EUR)	5 961	9 143	+53.4
Export volume (tonnes)	311 368	426 605	+37.0
Import volume (tonnes)	109 487	106 886	–2.4
Export unit value (EUR/tonne)	24 875	27 179	+9.3
Import unit value (EUR/tonne)	16 297	22 937	+40.7

The trade surplus expanded by more than 3 billion EUR, underpinned by strong export momentum and only a modest rise in import expenditure, which was almost entirely price-driven.

Exports hit a low of 4 915 million EUR in 2020 but rebounded to a record 12 471 million EUR by 2024

The sharp drop in 2020 (–39.9 % compared with 2019) was accompanied by a volume decline to 304 905 tonnes, the minimum recorded. The recovery was rapid: export value already exceeded the pre-pandemic level by 2022 and reached an all-time peak in 2024 before settling at 11 595 million EUR in 2025. Import values showed greater resilience, with a shallow dip in 2020 and steady growth thereafter, whereas import volumes fluctuated around 100 000–110 000 tonnes.

Import growth was largely driven by a 40.7 % rise in unit prices, as volumes stagnated

While exports recorded both higher volumes and moderately higher prices, the import picture was dominated by price inflation. Import volumes actually fell slightly (–2.4 %), meaning the 37.4 % increase in import value came entirely from higher unit prices. This divergence points to rising costs for imported raw materials and a possible shift toward higher-value niche ingredients.

Reshuffling of trade partners and increasing diversification

The partner landscape became more balanced over the period, with declining concentration and the emergence of new fast-growing origins and destinations.

The Herfindahl-Hirschman Index fell for both exports (–25.0 %) and imports (–10.9 %), signalling greater diversification

According to the concentration indicators, the HHI for export values dropped from 1 152 in 2015 to 864 in 2025, with a temporary dip below 650 in 2021-2023. On the import side, the HHI fell from 3 821 to 3 403, still reflecting a more concentrated supplier base, but the trend is unmistakeably toward a broader set of partners.

The United States remained the largest export destination but displayed extreme volatility, while Mexico and Türkiye became growth engines

Top export partners data illustrate divergent trajectories:

Export partner	2015 (million EUR)	2025 (million EUR)	Change (%)
United Kingdom	995	1 125	+13.1
United States	2 177	2 253	+3.5
Mexico	718	1 882	+162.1
Türkiye	251	436	+73.6
Russian Federation	326	515	+57.9
Algeria	76	180	+136.2
Nigeria	166	123	–26.1

Exports to the US collapsed to 172 million EUR in 2020 before soaring to 3 726 million EUR in 2024, underscoring huge year-to-year swings. Mexico's stable and rapid ascent, alongside double-digit growth in Türkiye and Algeria, offset the decline in Nigeria and contributed to diversification.

On the import side, Switzerland's dominant position was gradually eroded by rising flows from Türkiye, India and Thailand

Switzerland remained the leading supplier, with imports rising from 986 million EUR in 2015 to 1 254 million EUR in 2025 (+27.2 %). However, the top import partners table shows that other origins grew much faster: imports from Türkiye jumped from 4.8 million EUR to 27.7 million EUR (+478.1 %), India from 7.4 million EUR to 13.4 million EUR (+80.2 %), and Thailand from 20.9 million EUR to 39.9 million EUR (+90.9 %). These changes, together with the decline of the HHI, reflect a gradual rebalancing of the EU's supply base.

Structural shifts within the EU and between product segments

The performance of CN 3302 was not uniform across Member States or sub-product categories; food-grade mixtures led the export expansion, while industrial raw materials dominated the import side, and a few Member States accounted for a disproportionate share of trade.

Food and drink mixtures (3302 10) accounted for the bulk of export value and drove the post-2020 rebound

The product segment breakdown reveals a striking divergence. Exports of 3302 10 rose from 6 418 million EUR in 2015 to 9 064 million EUR in 2025, while 3302 90 exports grew from 1 327 million EUR to 2 531 million EUR. By volume, food-grade shipments expanded by 43.4 % (216 246 t to 310 026 t) against a 22.5 % increase for industrial mixtures. After the 2020 shock, 3302 10 exports more than doubled from their 2020 low of 3 352 million EUR, confirming that demand for food and beverage flavourings was the main growth catalyst.

Industrial raw material mixtures (3302 90) dominated imports and experienced the sharpest unit price increases

Imports of 3302 90 reached 1 659 million EUR in 2025, compared with 1 076 million EUR in 2015, while 3302 10 imports grew only from 708 million EUR to 794 million EUR. Import volumes of 3302 90 were relatively stable (61 525 t to 63 306 t), meaning the entire value gain came from a 49.8 % rise in unit price (from 17 491 EUR/t to 26 197 EUR/t). This contrasts with 3302 10, where import prices increased by 23.3 % and volumes actually declined. The data suggest that the EU's dependency on imported industrial aroma chemicals became costlier without a corresponding volume expansion, possibly due to tighter supply or shifts to higher-value specialty ingredients.

Ireland and France were the most specialised EU exporters, while Ireland's dominant role at times accounted for over half of total EU exports

The specialisation map for 2025 shows Ireland with a Revealed Symmetric Comparative Advantage (RSCA) of 0.870 and an RCA of 14.43, producing 30.2 % of EU exports of CN 3302 while accounting for only 2.1 % of total EU goods exports. France (RSCA 0.495) and the Netherlands (RSCA 0.071) also reveal above-average specialisation. On the import side, France was the largest entry point, with imports rising from 867 million EUR to 1 539 million EUR (+77.6 %), while Germany's imports fell by 33.1 % to 231 million EUR. The top reporting Member States underscore that a handful of countries drive the EU's trade in these high-value aromatic mixtures.

Several price shocks intensified value growth without commensurate volume gains

The volatility analysis and detected price shocks highlight abrupt shifts. A 21.9 % import price shock hit the United States in 2022, while the United Kingdom experienced a 101.7 % import price spike in 2021, coinciding with post-Brexit trade frictions and a halving of volumes. On the export side, Mexico recorded a 60.7 % price shock in 2022, and the UAE and Saudi Arabia saw price rises exceeding 40 % in the same year. These events injected additional volatility into trade values but often reflected higher unit prices rather than physical trade growth, confirming that price dynamics were a major force shaping the overall market picture.

Conclusion

EU trade in flavour and fragrance mixtures (CN 3302) expanded robustly between 2015 and 2025, with the trade surplus climbing by more than half. The temporary pandemic disruption in 2020 was followed by a powerful export recovery, propelled primarily by food- and drink-industry mixtures. While export volumes and values grew together, imports saw almost no volume increase and were driven by steep price rises, especially for industrial raw materials. The partner structure became more diversified, with Mexico and Türkiye emerging as important export markets, and Türkiye, India and Thailand gaining share in imports. Production and trade remain highly concentrated in a few Member States, most notably Ireland and France. The prevalence of price shocks in major trade lanes underscores that much of the nominal value growth came from higher unit prices rather than physical expansion, a dynamic that warrants careful monitoring by industry stakeholders and policymakers.

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If you need advice on European trade policy, or representation for your interests in Brussels, feel free to contact me at support@tradedashboard.eu. You can find my CV at this address.