

TRADE: INCREASES WERE COMMON LAST YEAR

Deficits were cut or surpluses grew in many countries; the U.S. deficit in chemicals neared zero

FOREIGN TRADE JUST KEEPS GROWING, becoming a more important factor in the worldwide chemical economy. Last year saw big increases in many countries' chemical exports as well as imports. And in some cases, the export growth was enough to have a large effect on the country's chemical trade balance.

Chief among these was the U.S., where, until 2002, the country had exported, measured in dollar value, more chemicals than it imported. In 2002, though, the situation changed, and imports of chemicals into the U.S. soared while exports grew relatively modestly. By the end of that year, the country recorded its first chemical deficit in decades—\$2.46 billion, compared with a surplus of \$3.45 billion the year before. This deficit deepened to \$6.90 billion in 2003.

But last year, it changed direction. The U.S. chemical industry saw its exports rise 19.9% to \$113 billion while imports increased just 11.8% to \$113 billion, thus producing an even trade balance. Actually, the zero balance is a result of rounding. In fact, there was a deficit of \$82 million, but when compared with the 2003 deficit, the shortfall for 2004 looks like money one would put in a parking meter.

The shrinking U.S. deficit was helped considerably by exports increasing faster than imports in two product sectors—or

ganic chemicals and pharmaceuticals—in which imports have been and still are vastly higher than exports. Exports of organic chemicals rose 29.0% to \$26.4 billion as imports increased just 7.1% to \$35.2 billion, resulting in a deficit for the category of \$8.84 billion, compared with \$12.4 billion the year before.

The deficit for pharmaceuticals dropped to \$11.1 billion in 2004 from \$12.3 billion the year before, as exports rose 24.8% to \$24.0 billion and imports increased 11.4% to \$35.1 billion.

U.S. exports to other countries and regions of the world were uniformly strong. The largest gain was to Vietnam and China, where the U.S. industry sent \$4.8 billion in chemicals, up 29.5% from the year before. This was closely followed by the Middle East, which took in \$1.79 billion in U.S. chemicals, up 28.5% from 2003.

Canada had an even greater disparity between exports and imports of chemicals than did the U.S. Total Canadian chemical exports increased 19.1% to \$18.7 billion while imports rose only 6.8% to \$27.3 billion. Canada's trade deficit did not disappear, but it was cut to \$8.61 billion last year from \$9.86 billion in 2003. Canada also continues to increase trade with countries other than the U.S., which remains its largest trading partner. Exports to the U.S.

in 2004 represented 81.0% of Canada's total exports, and Canada received 66.8% of its imports from the U.S. Five years earlier, the U.S. took 85.9% of Canada's imports and provided 75.9% of its imports.

Out of seven major European producers, though, the chemical trade balance improved last year in only three—Germany, the Netherlands, and France. Germany's trade surplus increased 27.0% to \$41.9 billion as exports grew 21.0% to nearly \$123 billion, while imports rose 11.7% to \$80.6 billion.

In the Netherlands, exports rose 15.2% to \$55.5 billion, and imports were up just 3.3% to \$31.7 billion. This produced a surplus of \$23.8 billion, 35.9% higher than the 2003 surplus. France's exports rose 5.4% to \$68.5 billion, and imports increased 4.7% to \$55.0 billion, producing a 7.9% improvement in the surplus to \$13.6 billion.

Among other European countries, Belgium and the U.K. continued to run surpluses, although they were smaller than the year before. Italy and Spain continued to have growing trade deficits.

In Asia, the chemical trade surplus grew for Japan but fell for South Korea. China, which traditionally imports more chemicals than it exports, saw its deficit deepen. Japan's trade surplus in 2004 increased 31.9% from the prior year to \$21.5 billion. Chemical exports from Japan rose 21.8% to \$62.5 billion.

In China, chemical exports climbed 34.1% to \$24.8 billion, but imports were up even more, rising 34.8% to \$42.9 billion. As a result, the chemical trade deficit grew to \$18.0 billion in 2004 from \$13.3 billion the year before.



FACTS & FIGURES

U.S. TOTAL TRADE

Chemical industry was again number two among exporting sectors

\$ BILLIONS	U.S. EXPORTS				U.S. IMPORTS			
	2001	2002	2003	2004	2001	2002	2003	2004
Machinery & transport equipment	\$375.1	\$349.7	\$351.8	\$393.3	\$499.9	\$505.6	\$523.6	\$596.8
Miscellaneous manufactures	88.5	82.1	84.9	95.7	198.1	205.2	218.9	241.2
Chemicals	82.3	83.6	94.2	112.9	78.9	86.1	101.1	112.9
Manufactured goods classified by material	66.7	65.1	67.7	78.7	123.1	126.9	132.9	170.2
Food & live animals	41.2	40.3	43.3	45.5	37.2	39.2	42.9	47.0
Crude materials, inedible (except fuels)	28.1	28.1	33.5	37.0	20.2	19.8	20.0	26.3
Mineral fuels & lubricants	12.9	11.7	14.0	18.9	122.9	117.1	155.6	205.9
Beverages & tobacco	5.6	4.7	4.8	4.8	9.7	10.8	12.0	12.7
Animal & vegetable oils, fats & waxes	1.4	1.9	2.0	2.0	1.2	1.3	1.6	2.3
Other	29.2	26.0	27.5	29.1	50.8	51.5	50.8	54.3
TOTAL	\$731.0	\$693.2	\$723.7	\$817.9	\$1,142.0	\$1,163.5	\$1,259.4	\$1,469.6

SOURCE: Department of Commerce

U.S. CHEMICAL TRADE, BY COUNTRY

The U.S. enjoyed double-digit export increases with every world region

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
European Union	\$25,554	\$46,474	\$26,312	\$52,683	\$30,796	\$61,304	\$36,896	\$67,267	19.8%	9.7%
Canada	15,857	12,001	16,344	12,108	17,891	13,492	20,053	16,674	12.1	23.6
Latin America	17,319	4,461	16,464	4,297	18,030	5,220	22,484	6,901	24.7	32.2
Japan	6,510	6,679	6,501	7,008	6,804	8,013	7,702	8,325	13.2	3.9
China-Vietnam	2,280	2,066	3,043	2,426	3,731	3,029	4,831	3,770	29.5	24.5
Rest of Asia	10,368	4,274	10,957	4,951	12,587	6,259	15,442	6,276	22.7	0.3
Australia	1,750	442	1,637	367	1,809	526	2,189	587	21.0	11.6
Middle East	1,591	2,009	1,157	1,788	1,392	2,249	1,789	2,481	28.5	10.3
Africa	776	400	859	368	736	496	910	558	23.6	12.5
Other	317	64	319	61	377	462	564	103	49.6	-77.7
TOTAL	\$82,322	\$78,870	\$83,593	\$86,057	\$94,153	\$101,050	\$112,860	\$112,942	19.9%	11.8%

SOURCE: Department of Commerce

EUROPE CHEMICAL TRADE

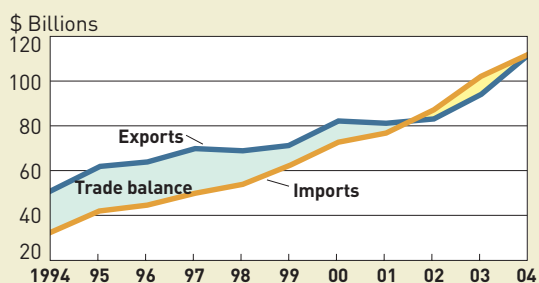
Both exports and imports picked up in most countries

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
Belgium	\$62,906	\$50,766	\$83,409	\$69,919	\$84,827	\$66,916	\$93,036	\$75,996	9.7%	13.6%
France	63,079	50,789	64,628	51,991	65,051	52,488	68,533	54,976	5.4	4.7
Germany	102,778	72,848	99,798	72,047	101,245	72,140	122,514	80,598	21.0	11.7
Italy	32,032	42,278	33,257	43,309	32,413	42,529	22,015	33,209	-32.1	-21.9
Netherlands	46,156	30,667	47,526	31,745	48,172	30,697	55,473	31,717	15.2	3.3
Spain	15,950	24,239	17,107	26,270	18,750	28,469	19,513	30,364	4.1	6.7
U.K.	51,590	42,111	52,735	43,594	57,699	47,473	58,405	50,001	1.2	5.3

NOTE: Monetary statistics for all years were converted from local currencies to U.S. dollars on the basis of the 2004 average exchange rates of \$1.00 U.S. = 0.804 euros and 0.546 pounds sterling. SOURCES: European Chemical Industry Council, national chemical associations

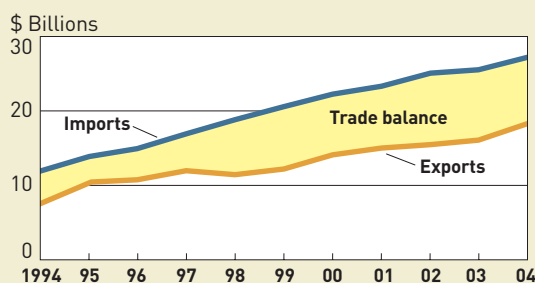
NORTH AMERICAN CHEMICALS

U.S. chemical trade deficit virtually disappeared ...



SOURCE: Department of Commerce

... while in Canada, exports also increased faster than imports



NOTE: \$1.00 U.S. = \$1.302 Canadian.
SOURCES: Industry Canada, Statistics Canada

GOT A THING FOR DATA?

If you're itching to do your own calculations with all these numbers, let yourself go ... to www.cen-online.org, that is, where you can access downloadable versions of these tables.

U.S. CHEMICAL TRADE, BY PRODUCT

Boost in exports brought imports and exports even for the year

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
Organic chemicals	\$16,946	\$29,626	\$16,839	\$30,213	\$20,451	\$32,876	\$26,377	\$35,212	29.0%	7.1%
Plastics in primary form	13,511	6,322	13,896	6,425	15,127	7,366	18,512	8,654	22.4	17.5
Medicinals & pharmaceuticals	15,421	18,624	16,150	24,719	19,209	31,516	23,982	35,105	24.8	11.4
Inorganic chemicals	5,730	6,193	5,612	6,018	5,756	7,419	6,440	8,273	11.9	11.5
Plastics in nonprimary form	5,772	4,057	5,993	4,336	6,504	4,794	7,252	5,570	11.5	16.2
Perfume, toiletries & cleaning materials	6,031	3,753	6,135	4,195	6,857	5,611	7,745	6,951	13.0	23.9
Dyeing, tanning & coloring materials	3,879	2,480	3,976	2,358	4,282	2,481	4,690	2,669	9.5	7.6
Fertilizers	2,247	1,890	2,262	1,619	2,552	2,130	2,846	2,530	11.5	18.8
Other	12,785	5,925	12,730	6,174	13,415	6,857	15,016	7,978	11.9	16.3
TOTAL	\$82,322	\$78,870	\$83,593	\$86,057	\$94,153	\$101,050	\$112,860	\$112,942	19.9%	11.8%

SOURCE: Department of Commerce

CANADA CHEMICAL TRADE, BY PRODUCT

Exports boomed in 2004, exceeding a strong rise in imports

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
Basic chemicals	\$5,084	\$6,052	\$5,071	\$5,982	\$4,737	\$5,820	\$6,161	\$6,746	30.0%	15.9%
Resins, synthetic rubber & fibers	4,769	4,813	4,723	5,042	4,670	4,849	5,260	5,130	12.6	5.8
Pesticides, fertilizers & other agricultural chemicals	899	1,167	934	1,127	882	1,174	1,081	1,140	22.5	-2.9
Pharmaceuticals & medicine	1,772	5,410	1,960	6,187	2,612	6,907	3,081	7,303	17.9	5.7
Other chemical products	2,717	6,432	2,833	6,937	2,765	6,772	3,070	6,940	11.0	2.5
TOTAL	\$15,240	\$23,873	\$15,522	\$25,276	\$15,667	\$25,522	\$18,652	\$27,260	19.1%	6.8%
TOTAL WITH U.S.	\$13,091	\$17,277	\$13,184	\$17,851	\$13,029	\$17,495	\$15,116	\$18,222	16.0%	4.2%
U.S. SHARE	85.9%	72.4%	84.9%	70.6%	83.2%	68.5%	81.0%	66.8%		

NOTE: Monetary statistics for all years were converted from Canadian dollars to U.S. dollars on the basis of the 2004 average exchange rate of \$1.00 U.S. = \$1.302 Canadian. SOURCES: Statistics Canada, Industry Canada

ASIA CHEMICAL TRADE, BY PRODUCT

Trade in chemicals continued to surge in Japan and South Korea

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
JAPAN										
Organic chemicals	\$10,817	\$8,097	\$11,493	\$8,085	\$13,458	\$9,323	\$16,508	\$10,710	22.7%	14.9%
Inorganic chemicals	1,814	2,941	1,936	2,952	2,295	3,468	2,708	4,339	18.0	25.1
Synthetic resins	9,338	5,365	10,495	5,425	12,197	6,311	15,385	7,518	26.1	19.1
Photographic materials	3,599	501	3,766	372	4,104	403	4,605	325	12.2	-19.4
Fertilizers	81	484	84	523	86	530	103	642	19.8	21.1
Dyes & pigments	1,948	825	2,046	801	2,430	950	2,996	1,037	23.3	9.2
Cosmetics	669	1,429	712	1,519	785	1,809	928	2,121	18.2	17.2
Rubber	5,443	1,752	5,981	1,839	6,879	2,259	7,875	2,834	14.5	25.5
Other	7,316	8,469	7,948	8,720	9,101	9,923	11,412	11,434	25.4	15.2
TOTAL	\$41,025	\$29,863	\$44,461	\$30,236	\$51,335	\$34,976	\$62,520	\$40,960	21.8%	17.1%
SOUTH KOREA										
Chemicals & chemical products	\$12,519	\$12,921	\$13,762	\$14,156	\$16,936	\$13,482	\$23,126	\$20,655	36.5%	53.2%
Petrochemicals ^a	8,394	4,514	9,625	4,745	11,917	5,821	17,015	8,015	42.8	37.7

a Defined as synthetic resins, synthetic fiber raw materials, and synthetic rubber.

SOURCES: Japan Chemical Importers & Exporters Association; National Statistical Office, Republic of Korea; Korea Petrochemical Industry Association

CHINA CHEMICAL TRADE, BY PRODUCT

Deficit widened as import growth outpaced increase in exports

\$ MILLIONS	2001		2002		2003		2004		CHANGE, 2003-04	
	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS
Inorganic chemicals	\$2,862	\$1,644	\$3,030	\$1,949	\$3,595	\$2,729	\$4,845	\$3,962	34.8%	45.2%
Organic chemicals	4,599	8,976	5,568	11,156	7,140	16,007	9,093	23,847	27.4	49.0
Pharmaceutical products	757	986	790	1,130	913	1,392	1,101	1,571	20.6	12.9
Fertilizers	389	1,556	350	2,354	800	1,763	1,309	2,288	63.6	29.8
Dyes & pigments	1,210	1,787	1,390	2,088	1,527	2,583	1,928	2,976	26.3	15.2
TOTAL	\$12,794	\$19,071	\$14,618	\$24,303	\$18,531	\$31,791	\$24,847	\$42,869	34.1%	34.8%

SOURCE: Customs General Administration of the People's Republic of China

U.S CHEMICAL TRADE BALANCE, BY PRODUCT

Improvement in organic chemicals trade deficit helped bring overall balance near zero

\$ MILLIONS	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Organic chemicals	\$2,027	\$3,070	\$192	\$-86	\$-3,119	\$-6,106	\$-9,632	\$-12,680	\$-13,373	\$-12,425	\$-8,835
Plastics in primary form	5,163	6,425	6,539	7,220	6,476	6,330	7,439	7,189	7,471	7,761	9,858
Medicinals & pharmaceuticals	1,413	1,010	254	-507	-1,224	-2,295	-1,572	-3,203	-8,570	-12,307	-11,123
Inorganic chemicals	-37	-74	-205	292	-276	-472	-582	-463	-406	-1,663	-1,833
Plastics in nonprimary form	1,388	1,516	1,699	2,114	1,834	1,529	1,983	1,715	1,656	1,710	1,682
Perfume, toiletries & cleaning materials	1,541	1,634	1,995	2,343	1,995	1,863	2,005	2,278	1,940	1,246	794
Dyeing, tanning & coloring materials	455	541	606	869	1,058	1,055	1,529	1,399	1,619	1,801	2,021
Fertilizers	1,403	1,834	1,676	1,696	1,714	1,618	796	357	643	422	316
Other	4,332	4,463	5,305	6,560	6,132	6,261	6,944	6,857	6,556	6,558	7,038
TOTAL	\$17,685	\$20,419	\$18,061	\$20,501	\$14,590	\$9,783	\$8,910	\$3,449	\$-2,464	\$-6,897	\$-82

SOURCE: Department of Commerce

CANADA CHEMICAL TRADE BALANCE, BY PRODUCT

Total chemical trade balance shrank for the first time since 2000

\$ MILLIONS	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Basic chemicals	\$-207	\$-25	\$-323	\$-647	\$-1,159	\$-1,438	\$-774	\$-969	\$-910	\$-1,082	\$-585
Resins, synthetic rubber & fibers	-268	72	-177	-65	-446	-538	-286	-45	-320	-180	130
Pesticides, fertilizers & other agricultural chemicals	-56	-99	-71	-88	-317	-103	-138	-267	-194	-291	-59
Pharmaceuticals & medicine	-1,280	-1,403	-1,526	-1,514	-2,023	-2,615	-3,156	-3,638	-4,227	-4,295	-4,223
Other chemical products	-2,234	-2,349	-2,374	-2,755	-3,255	-3,601	-3,757	-3,714	-4,104	-4,007	-3,870
TOTAL	\$-4,045	\$-3,805	\$-4,471	\$-5,070	\$-7,200	\$-8,294	\$-8,111	\$-8,633	\$-9,755	\$-9,856	\$-8,608

NOTE: Monetary statistics for all years were converted from Canadian dollars to U.S. dollars on the basis of the 2004 average exchange rate of \$1.00 U.S. = \$1.302 Canadian. SOURCES: Statistics Canada, Industry Canada

EUROPE CHEMICAL TRADE BALANCE

Chemical trade balance weakened in all but Germany, the Netherlands, and France

\$ MILLIONS	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Belgium	\$7,937	\$9,329	\$8,781	\$10,656	\$9,119	\$11,698	\$13,407	\$12,141	\$13,490	\$17,911	\$17,040
France	7,086	7,751	8,936	9,944	9,049	10,720	10,891	12,290	13,646	12,563	13,557
Germany	24,242	24,299	26,300	31,499	27,157	26,314	29,718	29,930	27,750	29,106	41,916
Italy	-9,072	-9,466	-8,838	-10,218	-10,810	-10,728	-11,313	-10,245	-10,052	-10,116	-11,194
Netherlands	8,204	10,840	10,949	11,301	10,793	11,369	14,889	15,489	15,780	17,475	23,757
Spain	-5,215	-6,204	-6,824	-7,382	-7,700	-7,864	-8,018	-8,289	-9,164	-9,719	-10,851
U.K.	6,790	4,876	5,745	7,251	7,644	7,207	10,760	9,478	9,130	10,226	8,404

NOTE: Monetary statistics for all years were converted from local currencies to U.S. dollars on the basis of the 2004 average exchange rates of \$1.00 U.S. = 0.804 euros and 0.546 pounds sterling. SOURCES: European Chemical Industry Council, national chemical associations