

Table SINV-55

USPTO utility patents granted in analysis of biological materials, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	1,042	931	847	948	867	863	854	695	937	964	993	998	1,471	1,460	1,476	1,646	1,676	1,716	1,747	2,011	2,085	2,208	2,175
North America	na	720	651	568	651	584	597	589	493	629	656	647	649	937	918	910	991	964	1,004	1,019	1,199	1,186	1,266	1,216
Canada	High	36	36	33	36	31	38	34	19	32	33	32	28	46	42	45	45	38	50	45	48	61	54	61
Mexico	Upper middle	0	1	0	0	0	0	2	0	0	0	0	1	1	2	0	1	2	1	1	2	1	1	1
United States	High	684	614	535	616	554	559	554	474	596	623	615	620	890	874	864	945	923	953	972	1,149	1,124	1,212	1,155
Central America and Caribbean	na	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	1	1	0	0	0	1	0	1
Puerto Rico	High	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
South America	na	4	0	2	3	2	2	4	1	4	1	1	1	1	3	3	4	5	5	3	6	5	6	7
Argentina	Upper middle	1	0	1	0	0	0	2	0	1	0	0	0	0	1	0	0	2	1	1	0	1	0	1
Brazil	Upper middle	2	0	1	1	0	2	2	1	2	0	1	1	0	2	2	2	3	1	1	3	2	5	5
Europe	na	199	176	192	187	180	175	161	120	175	179	173	183	289	285	286	340	387	357	360	423	443	478	458
EU-27 + UK ^a	na	182	161	181	175	169	165	147	113	167	166	160	170	273	266	260	317	360	327	324	383	400	434	425
United Kingdom	High	45	35	37	37	37	32	31	30	41	38	33	27	49	48	48	65	70	63	60	70	70	82	78
EU-27 ^b	na	137	126	144	138	132	133	116	83	126	128	127	143	224	218	212	251	290	264	264	313	330	352	348
Austria	High	5	2	3	4	4	3	3	1	1	4	2	3	7	4	10	9	10	9	7	11	9	11	8
Belgium	High	6	8	3	4	3	9	6	3	9	8	9	9	10	13	8	10	18	14	14	18	11	17	16
Denmark	High	7	4	8	6	10	9	6	5	4	6	4	1	7	10	8	10	10	11	9	12	8	10	13
Finland	High	5	13	6	10	10	5	4	4	5	2	5	6	10	5	9	5	6	10	9	7	13	11	8
France	High	27	22	30	23	24	23	17	20	32	23	28	25	39	36	36	52	62	54	56	70	68	69	71
Germany	High	61	58	58	66	56	54	52	31	52	52	45	64	104	97	88	109	104	96	95	106	128	143	135
Hungary	High	0	1	0	1	1	0	0	0	1	0	1	0	1	0	1	1	2	1	1	1	0	2	1
Ireland	High	0	0	2	2	2	1	1	0	3	1	0	0	1	2	2	5	2	3	2	1	3	3	5
Italy	High	6	4	5	3	4	6	3	3	4	4	7	6	10	12	10	13	17	13	14	15	16	19	19
Netherlands	High	7	6	10	6	4	8	8	5	2	8	8	11	12	13	12	11	22	24	15	30	25	24	24
Spain	High	2	1	1	1	2	3	1	1	1	3	6	6	3	3	4	4	6	9	11	13	14	12	14
Sweden	High	9	6	16	11	13	11	13	10	11	16	10	10	15	20	19	15	25	16	25	21	27	21	24
Other Europe	na	17	15	11	13	11	10	15	7	8	13	13	13	16	19	25	24	27	30	36	40	44	43	32
Other Europe-2020 ^b	na	62	50	48	49	47	42	46	37	50	51	46	40	64	67	74	89	97	93	96	110	113	125	110
Belarus	Upper middle	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	6	2	2	4	1	2	3	2	0	4	4	4	1	4	8	5	5	5	6	7	7	10	7
Russia	Upper middle	0	3	1	2	1	4	1	0	0	3	2	1	4	1	1	4	3	3	4	3	5	5	1
Switzerland	High	10	10	6	7	8	4	11	4	7	6	6	8	11	14	15	14	17	20	24	26	30	27	23
Ukraine	Lower middle	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Asia	na	94	87	67	86	81	71	84	69	105	110	151	139	217	226	245	267	278	297	310	319	381	389	410

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China	Upper middle	0	0	0	2	2	2	2	0	2	4	9	6	18	10	23	18	26	25	30	38	58	52	74
India	Lower middle	2	2	1	2	2	3	1	2	3	1	3	4	4	4	4	10	8	5	10	14	16	15	11
Japan	High	84	75	58	73	70	56	67	58	89	90	111	102	149	161	171	164	160	174	179	173	193	210	214
Malaysia	Upper middle	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1	1	3	1	0	1
Singapore	High	2	3	0	2	1	2	1	1	1	0	3	1	1	2	5	8	12	8	11	11	13	12	9
South Korea	High	3	5	4	1	2	3	4	3	6	8	10	13	26	27	25	34	42	51	54	56	67	70	65
Taiwan	High	2	3	3	6	5	5	10	5	4	5	15	11	18	19	18	30	29	33	24	23	32	28	32
Middle East	na	12	6	9	10	8	8	5	6	13	7	13	14	15	14	17	26	16	32	34	40	40	43	58
Israel	High	12	6	8	10	8	8	4	6	11	6	12	13	14	13	14	22	11	27	24	24	22	24	25
Africa	na	0	1	1	0	1	0	1	0	2	0	1	1	1	1	1	1	0	1	1	2	2	3	3
South Africa	Upper middle	0	1	1	0	1	0	1	0	2	0	0	0	1	0	1	1	0	1	1	1	2	2	2
Australia and Oceania	na	12	10	7	10	11	9	10	6	9	11	8	11	12	14	14	16	24	18	19	21	27	22	21
Australia	High	10	10	7	9	9	9	7	4	7	9	7	9	11	11	12	14	18	16	16	17	21	19	17
New Zealand	High	1	0	1	1	2	0	3	2	2	2	1	2	2	2	1	2	6	2	2	4	6	3	4
Unclassified	na	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom; USPTO = U.S. Patent and Trademark Office.

^a The United Kingdom was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. China includes Hong Kong.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.

Science and Engineering Indicators