

SPAS.

IN BRITAIN.

The solid contents of a pint are indicated by "grains in 20 fluid ounces."

- AIRTHREY (Bridge of Allan). Saline Aperient; 91 grs. in 20 oz. Chlorides of Sodium, Calcium, and Magnesium, and Sulphate of Calcium.
- ALDFIELD (Yorkshire). A soft water; slightly Sulphureous.
- ASKERNE (Yorkshire). A soft water; weak Saline Aperient and Sulphureous. Old Manor, 30 grs. in 20 oz., chiefly Magnesia and Lime.
- ASHBY-DE-LA-ZOUCH. Salt Brine, used only for baths, when mixed with water.
- BATH (Somersetshire). Altitude 16'. The only true thermal waters in England. Saline, 21 grs. in 20 oz., chiefly Sulphate of Lime, with Carbonic Acid and Nitrogen. Swimming Bath, 88°; Cross Bath, 104°; Kingston Spring, 108° (which partly supplies King's Bath); Queen's, 112°; King's, 117°; Hot Bath, 120°. Baths for chronic rheumatism, gout, and paralysis.
The water is aerated, and sold in bottles under the name of **Sulis Water**.
- BOSCOMBE (Bournemouth, Hampshire). Chalybeate; contains 2½ grs., which includes ½ gr. Iron in 20 oz., with Carbonic Acid.
- BRIGHTON (Sussex). A cold Chalybeate; contains 11½ grs., which includes 1 gr. Iron in 20 oz., with Carbonic Acid.
- BUTTERBY (Durham). Sulphureous. Not important.
- BUXTON (Derbyshire). Altitude 900'. Bracing air; pure water, temp. 82° F.; contains only 2½ grs. in 20 oz., with ½ cubic inch of Carbonic Acid, and 60 cubic inches of Nitrogen. Good in chronic gout and rheumatism.
- CHELTENHAM (Gloucestershire). Of the *Montpelier Spas*, No. 1 is Saline Aperient; No. 2, Ioduretted and Sulphuretted Chalybeate; 4, pure Saline; 4a, strongly Ioduretted Saline; 5, Ioduretted Magnesian Saline. Of the *Royal Old Wells*, one is Chalybeate, and the rest Saline Aperient; the whole with more or less Carbonic Acid. Season, from July to October.
- CLIFTON (Gloucestershire). Air mild, elastic. Hot Well, 74° F. Feebly Saline; contains 5½ grs. in 20 oz. A resort for pulmonary patients.
- CROFT (Yorkshire). Water 51° F. Saline, strongly Sulphureous; contains 19½ grs. in 20 oz.; chiefly Sulphate of Magnesia. Useful in skin diseases.
- DINSDALE (Northamptonshire). Water 52° F. Strongly Sulphureous; contains 27 grs. in 20 oz., chiefly Sulphate of Lime. Acting on the skin and kidneys, and useful in dyspepsia.
- DORTON (Buckinghamshire). Chalybeate, with Carbonic Acid; contains 12 grs. of Sulphate of Iron in 20 oz.; needs much dilution for internal use.
- DROITWICH (Worcestershire). Brine pits; when diluted, used for salt-baths only.
- DUNBLANE (Perthshire). Saline; contains 46 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.
- FILEY (Yorkshire). Saline aperient; contains 49 grs. in 20 oz., chiefly Chlorides of Sodium, Magnesium, and Calcium, and Sulphate of Magnesia.
- FLITWICK (Ampthill, Beds). Chalybeate Aperient; contains 31 grs. in 20 oz., Carbonate of Iron, Sulphates of Magnesia and Soda, Chloride of Magnesium, and Carbonate of Lime.
- GAINSBOROUGH (Lincolnshire). Weak Saline, Chalybeate; not important.
- GILSLAND (Cumberland). Air bracing and very healthy. Two springs; one strongly Chalybeate, and one strongly Sulphureous, useful in skin diseases and dyspepsia.
- GLOUCESTER SPA. Contains 70 grains in 20 oz., chiefly Chloride of Sodium and Sulphate of Soda; not important.
- HAIL-WESTON (St. Neots, Hunts). Saline Aperient; contains 30 grs. in 20 oz., more than half of which is Chloride of Sodium; also Sulphates of Magnesia and Soda, and Carbonate of Lime.

- HARROGATE** (Yorkshire). The old Sulphur spring contains 137 grs. in 20 oz., chiefly Chlorides, with 3.12 cubic inches of Carbonic Acid Gas, and 1.4 Sulphuretted and Carburetted Hydrogen. There are two principal Chalybeate springs. The new spring contains 62 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, Potassium, and Sodium, with Protochloride of Iron, together with Carbonic Acid and Nitrogen.
- HASTINGS** (Sussex). Air mild, Chalybeate: contains $2\frac{1}{2}$ grs. in 20 oz., chiefly Sulphates of Iron, Magnesia, Lime, and Soda, with $3\frac{1}{2}$ cubic inches Carbonic Acid Gas.
- HOCKLEY** (near Southend, Essex). Saline, and very mild Aperient.
- HORLEY GREEN** (Yorkshire). Aluminous, and strongly Chalybeate; contains large quantities of Sulphate of Iron. Not much used.
- HOVINGDON** (Northumberland). Feebly Alkaline and Sulphureous; 6 grs. in 20 oz., chiefly Carbonate of Soda and Chloride of Sodium.
- INVERLEITHEN** (Peeblesshire). Air pure, and scenery good. Saline; 28 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.
- KINGSWOOD** (Gloucestershire). Cherry rock bitter water; 56 grs. in 20 oz., chiefly Sulphates of Magnesia and Soda, with 4 cubic inches of Carbonic Acid.
- LEAMINGTON** (Warwickshire). Old Well, 48° F., contains 104 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium, and Sulphate of Soda with Carbonic Acid. The Saline Chalybeate contains 132 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, and Sodium, and Sulphate of Soda, with 2 cubic inches of Carbonic Acid. There are also other springs, useful in stomach and liver complaints.
- LLANDRINDOD WELLS** (Radnorshire). Altitude 700'. There are two springs, the saline and chalybeate, both of which contain about 50 grs. of solids in 20 oz.; chiefly Chlorides of Sodium, Calcium and Magnesium. The chalybeate water contains a small quantity of Iron.
- LONDON**, Bagnigge Wells, 1 Aperient, 1 Chalybeate; Chad's Well, near Battle Bridge, and St. Pancras Wells, both Aperient; Hampstead, Sadler's Wells, and Kensington Gardens, Chalybeate; Beulah, Kilburn, Epsom, and Streatham, are all Aperient; chiefly Sulphate of Magnesia.
- MALTON** (Yorkshire). A strong Saline Chalybeate, similar to Scarborough.
- MALVERN** (Worcestershire). Air mild, highly salubrious. Holywell, St. Anne, cold and pure, highly useful in painful affections of the kidneys and bladder.
- MATLOCK** (Derbyshire). Climate mild and humid. Calcareous, slightly Chalybeate, with Carbonic Acid.
- MELKSHAM** (Wiltshire). Two springs, one Saline, and one Chalybeate. These waters are charged with Carbonic Acid artificially, and bottled.
- MOFFAT** (Dumfriesshire). Hartfell spring, Aluminous and strongly Chalybeate; 12 grs. in 20 oz. A resort for pulmonary patients. Sulphur Wells, contains $4\frac{1}{2}$ grs. in 20 oz., chiefly Chloride of Sodium, and 1 cubic inch of Sulphuretted Hydrogen.
- PITCAITHLY** (Perthshire). Saline; contains 38 grs. in 20 oz., chiefly Chloride of Calcium and Chloride of Sodium, and 1 cubic inch of Carbonic Acid.
- PURTON** (Wiltshire). Iodide of Sodium and Bromide of Magnesium, with Sulphates of Magnesia and Soda: $43\frac{1}{2}$ grs. in 20 oz., and 6 cubic inches of Carbonic Acid Gas.
- SANDROCK** (I. of Wight). Aluminous Chalybeate, with Carbonic Acid; contains $41\frac{1}{2}$ grs. of Sulphate of Iron, and $21\frac{1}{2}$ grs. of Sulphate of Alumina in 20 oz. Used for baths, but much diluted when taken internally.
- SCARBOROUGH** (Yorkshire). Altitude 174'. Two Saline Chalybeates. North Well, $45\frac{1}{2}$ grs. in 20 oz. South Well, 66 grs. in 20 oz. Both Wells are

- similarly constituted, containing Sulphate of Lime and Sulphate of Magnesia, with a small amount of Nitrogen Gas.
- SHAP (Westmoreland). Saline; contains 48 grs. to 20 oz., of which 26 are Chloride of Calcium; also traces of Sulphuretted Hydrogen. Tonic and diuretic; good in scrofula.
- SHOTLEY (Northumberland). Saline, Chalybeate; contains 20 grs. in 20 oz., chiefly Chloride of Sodium, with 1 gr. Oxide of Iron, and $4\frac{1}{2}$ grs. Chloride of Calcium. Not much frequented.
- STRATHPEPPER (Ross-shire). Two springs; the Upper contains 18 grs. in 20 oz., chiefly Sulphates of Soda and Lime, with $3\frac{1}{2}$ cubic inches of Sulphuretted Hydrogen; the Lower contains $13\frac{1}{2}$ grs. in 20 oz. of the same salts, but with only $1\frac{1}{2}$ c. in. of Sulphuretted Hydrogen. The Upper contains the largest quantity of Sulphuretted Hydrogen of any spring in Britain. Much resorted to for gout, rheumatism, scrofula, and skin diseases.
- TUNBRIDGE (Kent). Altitude 289'. Chalybeate; temp. 50° F.; contains only 1 gr. in 20 oz., including $\frac{1}{4}$ th of a grain of Iron, with Carbonic Acid.
- TYNEMOUTH (Northumberland). Scenery picturesque. Chalybeates which may be drunk as an auxiliary to the sea-bathing, as at Scarborough.
- VICTORIA (Stratford, Essex). Saline Aperient; contains 81 grs. in 20 oz., chiefly Sulphate of Soda, and $\frac{1}{2}$ cubic inch of Sulphuretted Hydrogen. Useful in stomach and liver diseases.
- WHITBY (Yorkshire). Bagdale, Chalybeate; nearly 3 grs. in 20 oz., and $\frac{3}{4}$ th gr. of Carbonate of Iron.
- WINFRED at Holywell (Flintshire). Pure water, and flows at the rate of 21 tons a minute.
- WOODHALL (Lincolnshire). 55° F. Iodine and Bromine, with Chlorides of Calcium, Magnesium, Potassium, more than $\frac{1}{2}$ gr. Bromide of Sodium, and $\frac{1}{4}$ gr. Iodide of Sodium: 190 grs. in 20 oz.; strongly impregnated with Carbonic Acid. Useful in chronic rheumatism, scrofula, tertiary syphilis, etc.

FOREIGN.

The statements, regarding the utility of the several Waters in various complaints, are taken from circulars obtained from the Spas.

The dose is from a wineglassful to a tumblerful, and at the Spas the gas is often allowed to escape.

- ACHSELMANNSTEIN (Bavaria), altitude 1407'. Saline, aperient, and slightly chalybeate. Climate mild and equable. Season, May to September.
Baths and Vapour Baths, for incipient tuberculosis, cutaneous diseases, and derangements of the uterine system.

Buchner's Analysis of 16 oz. Troy = 7680 grs. of the Edelquelle brine spring:—

Chloride of Sodium	1723·10	Sulphate of Lime	31·98
Chloride of Ammonium	·19	Carbonate of Lime	·07
Chloride of Magnesium	13·84	Carbonate of Magnesia	traces
Bromide of Magnesium	·23	Peroxide of Iron and Alu-	·06
Sulphate of Soda	15·63	mina	·08
Sulphate of Potash	4·70	Silica	·08
	1757·69		1789·88 grs.

Gas.—Carbonic Acid.

- ADELHEIDSQUELLE (Heilbrunn, a healthy town in Bavaria), altitude 2000'. Saline, with Iodine and Bromine. Temp. of spring, 50° F. Season, May to September.

Powerfully alterative and tonic. Useful in scrofulous complaints, strumous affections of the skin, rheumatism, and gout, and for complaints peculiar to females.

Pettenkofer's Analysis of 16 oz. Troy = 7680 grs.—Contains about 47 grains of solid matter, viz. :—

Chloride of Sodium	38·06		45·48
Iodide of Sodium	·21	Carbonate of Magnesia	·14
Bromide of Sodium	·36	Alumina	·14
Carbonate of Soda	6·21	Carbonate of Iron	·07
Chloride of Potassium	·02	Silica	·14
Sulphate of Soda	·04	Phosphate of Lime	traces
Carbonate of Lime	·58	Organic matter	·16
	45·48		46·13 grains.

<i>Gases.</i>		Cub. Inch.
Carbonic Acid		13·18
Carburetted Hydrogen		8·02
Nitrogen		6·54
Oxygen		1·38

Imported. 29·12

AIX-LA-CHAPELLE (Rhenish Prussia), altitude 450'. Situated in a valley. Climate mild. Mean temperature in June, July, and August, 63° F. Saline, sulphureous.

Used for drinking, bathing, and douching; in cutaneous diseases, stiffness of joints, paralysis, obstructions of the liver, and syphilis.

Liebig's Analysis of 16 oz. Troy = 7680 grs. :—

	Kaiser- quelle, Fahr. 131°	Cornelius- quelle, 121·3°.	Rosen- quelle, 116·6°.	Quirinus- quelle, 113·6°.	
Chloride of Sodium	20·271	18·934	19·552	19·937	grains.
Bromide of Sodium	·028	·028	·028	·028	"
Iodide of Sodium	·004	·004	·004	·004	"
Sulphuret of Sodium	·073	·042	·057	·018	"
Carbonate of Soda	4·995	3·817	4·065	4·244	"
Sulphate of Soda	2·171	2·201	2·176	2·243	"
Sulphate of Potash	1·186	1·204	1·183	1·164	"
Carbonate of Lime	1·217	1·012	1·413	1·330	"
Carbonate of Magnesia	·395	·192	·204	·257	"
Carbonate of Strontia	·002	·002	·002	·002	"
Carbonate of Lithia	·002	·002	·002	·002	"
Carbonate of Protoxide of Iron	·073	·046	·046	·040	"
Silica	·508	·459	·455	·476	"
Organic Matter	·577	·713	·703	·751	"
	31·502	28·654	29·888	30·496	grains.

<i>Gases.</i>				
Nitrogen	9·00	7·79	9·14	6·41 per cent.
Carbonic Acid	89·40	92·91	90·31	93·25 "
Carburetted Hydrogen	·37	traces	·55	·26 "
Oxygen	1·23	traces	0·00	·08 "

Imported.

AIX-LES-BAINS (Savoy), altitude 768'. Climate mild. For drinking and for douching.

Recommended for rheumatism, eczema, gout, and sciatica.

Donjean's Analysis of 16 oz. Troy = 7680 grs. :—

	Temperature, Fahr. 108°25'—111°.	Sulphur Spring, 108°25'—116°34'.	Alum Spring, 108°25'—116°34'.
Sulphate of Soda	·7374	·3256	grains.
Sulphate of Magnesia	·2709	·2380	"
Sulphate of Lime	·1229	·1152	"
	1·1312	·6788	(continued)

	Sulphur Spring.	Alum Spring.
(Continued.)	1·1312	·6788 grains.
Sulphate of Alumina	·4209	·4761 "
Sulphate of Iron	traces	traces "
Chloride of Sodium	·0613	·1075 "
Chloride of Magnesium	·1322	·1690 "
Fluoride of Calcium	·0191	·0200 "
Phosphate of Lime and Alumina		
Iodide of Potassium	traces	traces "
Carbonate of Lime	1·1405	1·3901 "
Carbonate of Strontia	traces	traces "
Carbonate of Protoxide of Iron	·0680	·0719 "
Silica	·0384	·0330 "
	3·0116	2·9464 grains.
<i>Gases.</i>		
Nitrogen	·03204	·08010 volumes.
Carbonic Acid	·02578	·01334 "
Sulphuretted Hydrogen	·04140	·0 "
Oxygen	·0	·01840 "
	·09922	·11184 volumes.

ALET (Aude, France). Thermal 82° F. for baths and a ferruginous water 50°. Tonic, and useful in cases of debility and dyspepsia.

ALEXANDERBAD (Bavaria). Altitude 1754'. Climate rough, and unsuited for delicate lungs. Scenery good. Water chalybeate, 60° F., very exciting. There is a hydropathic establishment, and pine-foilage baths for rheumatism.

Contains 2½ grains of solid constituents in 16 oz. Troy = 7680 grs.
about ½ grain Carbonate of Iron,
and 28 cubic inches of Carbonic Acid.

ALEXISBAD (Germany, 2 miles W. of Harzgerode). In the romantic Selke valley.

Source, Selkenbrunnen, Saline; 1½ grain in 16 oz. troy.
" Alexisbrunnen, Ferruginous; 3½ grains in 16 oz. troy.
" Ernabrunnen, Ferruginous; 1½ grain in 16 oz. troy.

ALLEVARD (Isère, France). Altitude 1473'. A gaseous iodo-sulphuretted water.

Dupasquier's Analysis of 16 oz. :—

Carbonate of Lime	2·135 grains.
Carbonate of Magnesia	·070 "
Chloride of Sodium	3·521 "
Chloride of Magnesium	·427 "
Sulphate of Lime	2·086 "
Sulphate of Magnesia	3·661 "
Sulphate of Soda	3·675 "
Silicic Acid	·035 "
Iodine	·042 "

156·52 "

Gases.

Sulphuretted Hydrogen (free)	173·25 grains.
Carbonic Acid Gas (free)	679·00 "
Nitrogen	287·00 "

1139·25 "

ALTWASSER (Prussian Silesia, 35 miles S.W. of Breslau). Altitude 1255'. Lies in a charming valley. Climate mild and bracing. Water alkaline, chalybeate, tonic, restorative, for drinking and for baths.

Fischer's Analysis of 16 oz. Troy = 7680 grs. :—

	Georgen- brunnen. Temperature, Fahr. 70°.	Ober- brunnen. 70°.
Carbonate of Iron	·37	·306 grains.
Carbonate of Manganese	0	·13 "
Chloride of Potassium	·09	·09 "
Sulphate of Potash	0	·086 "
Sulphate of Soda	·89	·40 "
Sulphate of Magnesia	0	·25 "
Carbonate of Magnesia	·72	·308 "
Carbonate of Lime	2·88	·860 "
Sulphate of Lime	0	·100 "
Carbonate of Soda	1·21	·000 "
Silica	·08	·52 "
	6·54	3·18 grains.
Carbonic Acid	106 in 100	50 in 100 volumes.

A POLLINARIS (Neuenahr). Imported and drunk at meals. (*See Neuenahr.*)

ARNSTADT (Germany, 10 miles W. of Erfurt). Altitude 926'. Climate healthy. Season, June to September. Its brine spring, when diluted, used for baths, and for poultices with bran or malt; for scrofula. Contains about 1825 grains of solids in 16 oz. Troy = 7680 grs. viz.:—

Chloride of Sodium	1723·0 grains.
Chloride of Calcium	49·5 "
Chloride of Magnesium	39·0 "
Sulphate of Lime	13·0 "
Bromide of Magnesium	0·39 "

AUTEUIL (Seine, France). A ferruginous water having properties similar to that of Alet.

BADEN (near Vienna). Altitude 638'. Air bracing, temperature changeable. Sulphureous and saline.

Chiefly used for bathing, in which both sexes promenade. The mineralised mud is employed for cataplasms in rheumatism.

Keller's Analysis of 16 oz. Troy = 7680 grs. :—

	Rämer- quelle. Temperature, Fahr. 92°—97°.	Leopold's- quelle. 91·70°.
Sulphuret of Magnesium	0·1250	·1180 grains.
Sulphate of Lime	5·6563	5·5473 "
Sulphate of Potash	·4892	·5560 "
Sulphate of Soda	2·1281	2·5766 "
Chloride of Sodium	1·9906	2·2659 "
Carbonate of Lime	1·3056	1·5936 "
Carbonate of Soda	·5329	·0530 "
Chloride of Magnesium	1·6156	1·5145 "
Silica	·1850	·2166 "
Organic Matter	·0431	0 "
	14·0714	14·4415 grains.
<i>Gases.</i>		
Carbonic Acid	1·433	3·2256 cubic inches.
Sulphuretted Hydrogen	·082	·6720 "
Nitrogen	·465	7·8711 "
Oxygen	·052	·9033 "
	2·032	12·6780 cubic inches.

BADEN-BADEN. Altitude 616'. Air pure and mild. Mean annual temperature 48° F. Season, May to October.

Baths for rheumatism and paralysis.

Bunsen's Analysis of 16 oz. Troy = 7680 grs. :—

	Hauptquelle. Temperature 155° F.
Chloride of Sodium	16·520 grains.
Bicarbonate of Lime	1·273 "
Bicarbonate of Magnesia	·042 "
Bicarbonate of Protoxide of Iron	·037 "
Bicarbonate of Protoxide of Manganese	traces "
Bicarbonate of Ammonia	·051 "
Sulphate of Lime	1·556 "
Sulphate of Potash	·017 "
Phosphate of Lime	·021 "
Arsenate of Iron	traces "
Chloride of Magnesium	·097 "
Chloride of Potassium	1·258 "
Bromide of Sodium	traces "
Silica	·914 "
Alumina	·008 "
Nitrates	traces "

22·093 grains.
·299 grains.

The Lithia waters for gout and lithiasis:—

	Mur- quelle.	Fett- quelle.
Chloride of Sodium	15·5534	16·9767 grains.
Chloride of Lithium	2·3694	·2315 "
Chloride of Potassium	1·7985	·8137 "
Chloride of Magnesium	·8022	·4406 "
Chloride of Calcium	·5127	" "
Chloride of Copper		trace "
Bicarbonate of Lime	·9748	1·4760 "
Bicarbonate of Magnesia	·2673	·0112 "
Bicarbonate of Protoxide of Iron	·0029	·0112 "
Bicarbonate of Protoxide of Manganese	trace	trace "
Sulphate of Lime	1·8524	1·3390 "
Sulphate of Potash		·3344 "
Sulphate of Strontia	·0052	" "
Sulphate of Baryta		trace "
Ammonia	trace	trace "
Arsenate of Iron	trace	·0038 "
Silica	·3200	·4477 "

24·4588 22·0858 grains.

BAGNÈRES-DE-LUCHON (South of France). Altitude 2000'. Season, May to October.

Contains in 20 oz. about 2 grains of Sulphurets of Iron, Manganese, Sodium. The springs range in temperature from 60° F. to 154° F.; water is clear; has a sulphureous odour; is good in lymphatic and cutaneous affections.

BARÉGES (Hautes-Pyrénées, France). Altitude 4000'. There are nine sulphureous springs. Temperature 86° to 111° F. Season, May to September.

Useful in inveterate chronic rheumatism and skin diseases.

Analysis of 16 oz. Troy = 7680 grs. Le Tambour Source :—

Sulphuret of Sodium	·360 grains.
Sulphate of Soda	·384 "
Chloride of Sodium	·307 "
Silica	·519 "
Lime	·022 "
Magnesia	·026 "
Soda	·039 "

Gas. 1·657 grains.
Nitrogen ·004 c. inches.
Imported.

BELLTHAL (Rhenish Prussia, near Coblenz). Altitude 400'.

Drunk as a table water.

Contents in 10,000 parts:—

Carbonate of Soda	2·7918
Carbonate of Potash	·6898
Silicate of Soda	·6974
Carbonate of Magnesia	2·5676
Carbonate of Lime	5·9773
Chloride of Sodium	·2738
Sulphate of Soda	·1243
Nitrate of Soda	·0745
Carbonate of Iron	·0198
Carbonate of Ammonia	·0076
Carbonate of Manganese	·0047
Phosphate of Lime	·0015
Alumina	·0026
Free Carbonic Acid	36·410 parts by volume.

Imported.

BERKA (Duchy of Saxe-Weimar).

The sulphureous spring contains 13½ grains of solids in 16 oz. Troy = 7680 grs.

For chronic rheumatism, anaemia, and great debility.

Sulphate of Lime	5·5 grains.
Carbonate of Lime	4·33 "
Sulphate of Soda	1 "
Sulphate of Magnesia	2 "
Chloride of Calcium	0·7 "

Gases.

Carbonic Acid	3·4 c. inches.
Sulphuretted Hydrogen with Nitrogen	6·4 "

The chalybeate spring contains about 22 grains of solids in 16 oz. viz.:—

Sulphate of Lime	13·5 grains.
Carbonate of Lime	3·5 "
Chloride of Calcium	0·5 "
Chloride of Magnesium	0·5 "
Carbonate of Magnesium	0·4 "
Sulphate of Magnesia	3·0 "
Carbonate of Iron	0·3 "

BETHESDA (Wisconsin, U.S.A.). Used in the treatment of diseases of the kidneys.

Chandler's Analysis of 16 oz.:—

Chloride of Sodium	·1392 grains.
Sulphate of Potassa	·0546 "
Sulphate of Soda	·0542 "
Bicarbonate of Lime	2·0426 "
Bicarbonate of Magnesia	1·4865 "
Bicarbonate of Protoxide of Iron	·0050 "
Bicarbonate of Soda	·1507 "
Phosphate of Soda	·0146 "
Alumina	·0889 "
Silica	·2379 "
Organic Matter	4·2745 "

BILIN (Bohemia). Altitude 645'.

Taken for indigestion and acidity of the stomach, and drunk as a table water.

Analysis of 16 oz. Troy = 7680 grs. :—

Carbonate of Soda	23·106 grains.
Carbonate of Lime	3·089 "
Carbonate of Magnesia	1·098 "
Carbonate of Lithia	·110 "
Carbonate of Iron	·080 "
Sulphate of Soda	6·350 "
Sulphate of Potash	·985 "
Chloride of Sodium	2·935 "
Phosphate of Alumina	·065 "
Silica	·244 "
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	38·062 "

Free Carbonic Acid	15·092 cubic inches.
Carbonic Acid (as bicarbonate)	17·247 " "

Imported.

BIRMENSTORF (Switzerland). Altitude 1300'. A mild laxative. Dose, $\frac{1}{2}$ to $\frac{3}{4}$ of a tumblerful-half an hour before breakfast. Temp. 50° F.

Analysis of 1000 parts according to Bolley :—

Sulphate of Potash	·1042
Sulphate of Soda	7·0356
Sulphate of Lime	1·2692
Sulphate of Magnesia	22·0135
Chloride of Magnesium	·4604
Carbonate of Lime	·0133
Carbonate of Magnesia	·0324
Magnesia (crenate of)	·1010
Peroxide of Iron	1·0107
Alumina	·0277
Silica	·0302
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	31·0982

Imported.

BIRRESBORN (Rhenish Prussia). Altitude 1100'. A table water, drunk *ad lib.*

Analysis of 1000 parts :—

Bicarbonate of Soda	2·81681
Bicarbonate of Lithia	·003346
Bicarbonate of Lime	·272988
Bicarbonate of Baryta	·000154
Bicarbonate of Strontia	
Bicarbonate of Magnesia	1·092873
Bicarbonate of Protoxide of Iron	·035116
Bicarbonate of Manganese	·000668
Biborate of Soda	traces.
Sulphate of Potash	·052091
Sulphate of Soda	·135926
Chloride of Sodium	·357620
Bromide of Sodium	·000363
Iodide of Sodium	·000005
Phosphate of Soda	·000228
Nitrate of Soda	traces.
Phosphate of Alumina	traces.
Silicic Acid	·024532
	<hr/>
	4·827591

Free Carbonic Acid	2·333967
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7·161558

BOCKLET (near Kissingen). Altitude 620'. Pleasant residence.

Tonic, useful in diseases peculiar to females. Carbonic Acid Baths.

Temperature 50° F.	Ludwig's- quelle. (Ludwig's Spring.)	Schwefel- quelle. (Sulphur Spring.)	Stahl- quelle. (Steel Spring.)
<i>Analysis of 16 oz. Troy = 7680 grs. :-</i>			
Sulphate of Soda	6.25	.25	2.54 grs.
Sulphate of Magnesia	0	0	3.23 "
Sulphate of Lime . . . . .	.50	0	0 "
Chloride of Sodium	27.50	.25	6.55 "
Chloride of Magnesium	0.75	0	4.43 "
Carbonate of Soda	0	.50	0 "
Carbonate of Magnesia	1.25	.50	3.36 "
Carbonate of Lime	7.25	2.50	6.54 "
Carbonate of Iron . . . . .	.65	.40	.61 "
Silica . . . . .	.50	.10	.22 "
<i>Gases.</i>			
Carbonic Acid	44.65	4.90	27.48 "
Sulphuretted Hydrogen	31	21.5	39.3
	0	0.2	0

BONIFACIUS (Hesse-Nassau). Altitude 825'. Stimulates the intestines and urinary organs.

Analysis of 16 oz. :-

Chloride of Sodium	71.6912 grains.
Chloride of Magnesium	6.9076 "
Chloride of Lithium	1.5274 "
Sulphate of Soda . . . . .	.9919 "
Sulphate of Potash	1.1214 "
Sulphate of Lime	10.9179 "
Bicarbonate of Lime	4.6431 "
Bicarbonate of Magnesia . . . . .	.0581 "
Bicarbonate of Oxide of Iron . . . . .	.0672 "
Iodide of Magnesium . . . . .	.0343 "
Bromide of Magnesium . . . . .	.0329 "
Silicic Acid . . . . .	.0798 "

Total Solid Constituents 98.0728 "

Carbonic Acid Gas (free) 5.8102 "

Temperature, 10.6 Centigrade (51° Fahr.)

BONNES (Basses-Pyrénées, France). Altitude 2000'. Air cold and penetrating.

A sulphureous and saline water, less exciting than Baréges. Imported.

Contains in 16 oz. Troy = 7680 grs., 5½ grains of solids.

BONNES (Basses-Pyrénées).

Increases the natural secretion of the skin and kidneys. Dose, ¼ to ½ a tumbler taken before breakfast with two or three spoonfuls of boiling milk.

Analysis of 1 gallon = 70,000 grs. :-

Chloride of Potassium	2.40
Chloride of Sodium	17.59
Sulphate of Sodium	2.86
Silicate of Sodium	5.28
Sulphate of Calcium	11.14
Silica	1.02
Magnesium, Lithium, Nitrates, and Phosphates	traces.
Sulphuretted Hydrogen	1½ cubic inches.

BORCETTE or BURTSCHIED (near Aix-la-Chapelle).

There are two kinds of springs.—the warmer one, Mühlenbadquelle, 171° F., is free from Sulphuretted Hydrogen; the cooler, from 110° to 140° F., contains Sulphuretted Hydrogen. Both kinds are used for baths.

BOURBOULE (la) (Puy-de-Dôme, France). Altitude 2600'.

Drunk for diseases arising from impoverished blood, skin diseases, rheumatism, gout, sciatica, &c.

Analysis of one litre (35 fluid oz.), "Choussy" Spring:—

Arsenious Acid (Arsenicum ·0075)	·0115	grammes.
Hydrochloric Acid	2·0447	"
Sulphuric Acid	·1098	"
Silica	·0420	"
Oxide of Iron	·0053	"
Lime	·0490	"
Magnesia	·0092	"
Soda	2·6395	"
Potash	·0731	"
Lithia	traces	"
	4·9841	"
Free Carbonic Acid	·3513	"
Do. as Carbonates	1·3242	"
	6·6586	"

Analysis of one litre, "Perrière" Spring:—

Arsenious Acid (Arsenicum ·0070)	·0108	grammes.
Chloride of Sodium	2·8406	"
Chloride of Potassium	·1623	"
Chloride of Magnesium	·0320	"
Bicarbonate of Soda	2·8520	"
Bicarbonate of Lime	·1905	"
Sulphate of Soda	·2084	"
Peroxide of Iron	·0021	"
Silica	·0200	"
Alumina	traces	"
	6·3587	"
Free Carbonic Acid	·0518	"
	6·4105	"

BUDA-PESTH (Hungary). Bitter Aperient Water.

In 16 oz. Troy = 7680 grs. :—

	Hunyadi Janos.		Royal Hungarian
	Liebig.	Bunsen.	Prof. Than.
Sulphate of Magnesia	122·8	171·64	138·17 grs.
" Soda	122·1	173·18	114·43 "
" Potash	·65	·92	2·18 "
" Lime	—	—	11·62 "
Chloride of Sodium	9·98	13·05	22·13 "
Bicarbonate of Soda	6·11	5·20	13·19 "
Carbonate of Soda	—	—	2·09 "
Carbonate of Lime	7·16	6·12	— "
Carbonate of Strontia	—	·20	— "
Oxide of Iron and Alumina	·03	·004	·05 "
Siliceous Earth	·008	·08	·03 "
Carbonic Acid free and combined	4·00	4·0	2·53 "
	Imported.		Imported.

BUDA-PESTH (Hungary)—*continued*. Victoria Ofener Bitter Water. For indigestion, hæmorrhoids, gout and rheumatism.

Analysis of 16 oz. :—	Temperature 63° F.		
	Roscoe's Analysis.	Ballo's Analysis.	Ulex Analysis.
Sulphate of Magnesia	229·6749	226·6600	235·20
Sulphate of Soda	120·1851	146·6780	136·85
Sulphate of Potash	3·0849	2·1735	8·96
Sulphate of Lime	16·3128	11·2140	9·31
Chloride of Sodium	12·3956	15·7017	15·96
Bicarbonate of Soda	8·3188	3·4860	14·70
Alumina	·0756	·1603	2·10
Silica	·4109	·3108	4·20
Phosphoric Acid	trace	trace	trace
Total Soluble Solids	390·4586	406·3843	427·28
Total Soluble Solids (found directly)	390·0750	407·0920	—
Specific Gravity	1·0534	1·05362	1·055

BUDA or OFEN (opposite Pesth, Hungary). Altitude 461'.

Used externally. Efficacious in chronic gout, rheumatism, eczema, and psoriasis. Internally, in gastric catarrh, gouty diathesis, ulceration of the stomach, obstinate constipation. There are three swimming baths.

Sigmund's Analysis of 16 oz. of the Trinkquelle :—

Temperature, 141·5° Fahr.	
Sulphate of Soda	2·95 grains.
Chloride of Sodium	·82 "
Carbonate of Soda	2·02 "
Carbonate of Magnesia	0·46 "
Carbonate of Lime	3·12 "
Silica	0·69 "
Alumina	0·18 "

<i>Gases.</i>	
Carbonic Acid	10·24 grains.
Sulphuretted Hydrogen	5·72 c. inches.
	traces.

BUFFALO LITHIA (Mecklenburg Co. Va., U.S.A.). Altitude 500'.

Used in the treatment of gout, rheumatism, and chronic Bright's disease.

Analysis of 16 oz. :—	No. 1.	No. 2.	No. 3.
Sulphate of Magnesia	·1530	·0885	·0150
Sulphate of Alumina	·8180	·9067	·3035
Sulphate of Lime	1·9251	3·3067	·2353
Sulphate of Potash	·0463	—	—
Carbonate of Potash	—	2·9300	·1852
Bicarbonate of Lime	3·9277	1·4963	·2524
Bicarbonate of Lithia	·1484	·2250	traces
Bicarbonate of Baryta	—	·1750	—
Bicarbonate of Protoxide of Iron	·0500	·0300	·3774
Chloride of Sodium	·1256	·4921	·0217
Chloride of Silicon	1725	·1873	·0570
Phosphoric Acid	traces	traces	traces
Iodine	traces	traces	—
Organic Matter	traces	traces	traces
	7·3666	9·8376	1·4475
Sulphuretted Hydrogen	·59 cubic ins.	·83 c. ins.	·34 c. ins.
Carbonic Acid Gas	6·91 "	5·92 "	1·16 "

BUSSANG (Vosges, France). A ferruginous and alkaline water, mild, laxative, for weak digestion. Dose, Half-a-pint half an hour before meals.

Analysis of 1 Litre. (35 fluid oz.) :—

Carbonate of Soda	·789 grammes.
Carbonate of Lime	·340 "
Carbonate of Magnesia	·150 "
Carbonate of Strontia	traces "
Carbonate of Iron	·017 "
Crenate of Iron, Manganese, and traces of Chloride of Sodium	·078 "
Sulphate of Soda and Lime	·110 "
Silicate of Soda	} ·002 "
Silicate of Lime	
Silicate of Alumina	
Free Carbonic Acid	1·486 "
Imported.	·41 "

CARLSBAD (Bohemia). Altitude 1200'. Season, June to September.

Drunk for obstinate constipation, affections of liver, gout, rheumatism and diabetes.

Göttl's Analysis of 16 oz. Troy = 7680 grs. :—

	Sprudel. 162° F.	Schloss- brunnen. 122° F.	Wolf's Analysis. Markt-Brunnen. 119·3° F.
Sulphate of Soda	19·9606	10·145	17·9919 grs.
Carbonate of Soda	9·0624	8·555	9·4553 "
Chloride of Sodium	8·7245	8·463	8·3298 "
Sulphate of Potash	·3696	11·558	1·9603 "
Carbonate of Lime	2·0198	2·419	2·1418 "
Carbonate of Magnesia	·3996	·299	1·8987 "
Carbonate of Iron	·0307	·023	·0890 "
Phosphate of Alumina	·2150	·031	0 "
Silica	1·0520	·43	1·3271 "
Carbonate of Lithia	0	0	·0100 "
Carbonate of Strontia	0	0	·0377 "
Carbonate of Manganese	0	0	·0185 "
Iodide of Sodium	0	0	·0209 "
Bromide of Sodium	0	0	·0133 "
Phosphate of Soda	0	0	·0160 "
Fluoride of Sodium and Silicium	0	0	1·4288 "
Alumina and Peroxide of Iron	0	0	·0251 "
<i>Gases.</i>	41·8340	41·922	44·7642 grs.
Carbonic Acid	7·8033	0	11·7602
Nitrogen	·0318	0	·0530
Imported.			

GISSHÜBLER, Temperature 7·2 to 7·5 R=45° to 45·5° F.

Liebig's Analysis of 16 oz. Troy = 7680 grs. :—

Bicarbonate of Soda	9·6944532
Chloride of Sodium	0·3070264
Sulphate of Soda	0·3761548
Sulphate of Potash	0·5197317
Bicarbonate of Lime	2·7794533
Bicarbonate of Magnesia	2·0694743
Bicarbonate of Protoxide of Iron	0·0468486
Bicarbonate of Protoxide of Manganese	0·0375306
Silicic Acid	0·4456797

Bicarbonate of Lithia	0·0714685
Alumina	0·0201600
Organic Matter	0·0020474
<hr/>	
Total of Solid Constituents	16·3700285
Real free Carbonic Acid Gas	20·6317593
<hr/>	
Total Constituents	37·0017878

Imported and drunk at meals.

CAUTERET (Hautes-Pyrénées). Altitude 3000'. Climate mild and sheltered. Temperature of Sulphur baths 98° to 131° F. Season, June to September. Rich in iodine, and more exciting than Baréges. Imported.

CHALLES (Savoy). Sulphureous, milder than Bareges. Imported.

CHARLOTTENBRUNNEN (Silesia). Altitude 1437'. Sheltered. Climate mild and bracing.

Excellent arrangements for whey-cure. Is resorted to for chronic pulmonary catarrh and atonic dyspepsia.

Charlottenquelle (a mild chalybeate) contains 5½ grains of solids in 16 oz.

Troy=7680 grs. Among them—

Carbonate of Iron	0·2 grains.
Carbonate of Soda	1·5 "
Carbonate of Lime	2·3 "
Carbonate of Magnesia	0·5 "
Carbonic Acid	18 c. in.

Elisenquelle (acidulous spring) contains 4 grains of solids in 16 oz.

Amongst them—

Iron	traces.
Carbonic Acid	17¼ c. in.

CHATELDON (France). Imported. } Are gaseous drinking-waters.
CONDILLAC (France). Imported. }

CONDAL (Rubinat, Pyrenees, Spain). A non-bitter aperient water, useful in chronic indigestion, and affections of the liver and spleen, jaundice. Half a tumblerful for a dose.

Analysis of one gallon :—

Sulphate of Soda	3123·592 grains.
Sulphate of Potash	34·036 "
Sulphate of Magnesia	215·374 "
Sulphate of Lime	115·792 "
Chloride of Sodium	130·109 "
Silica, Alumina, and Oxide of Iron	1·155 "
Loss	·635 "

Total Saline Constituents . . . 3620·693 "

Imported.

CONTREXEVILLE (Vosges, France). Climate severe. Temperature of water 53° F. Season, 20th May to 15th September. Resorted to for affections of the urinary organs.

Analysis of the "Pavilion Spring," by Debray :—

Bicarbonate of Lime	·402 grains.
Bicarbonate of Magnesia	·035 "
Bicarbonate of Iron	·007 "
Bicarbonate of Lithia	·004 "
Sulphate of Lime	1·163 "
Sulphate of Soda	·236 "

Sulphate of Magnesia . . . . .	.030 grains.
Silica . . . . .	.015 "
Chloride of Potassium . . . . .	.006 "
Chloride of Sodium . . . . .	.004 "
Fluoride of Calcium	traces.
Arsenic	traces.
	<hr/>
Free Carbonic Acid	2.304 "
	.080 "
Imported.	

Analysis of the "Le Cler" Spring in 16 oz. :—

Bicarbonate of Lime	2.800 grains.
Bicarbonate of Magnesia . . . . .	.231 "
Bicarbonate of Soda . . . . .	.056 "
Sulphate of Lime (anhydrous)	9.730 "
Sulphate of Magnesia	1.645 "
Sulphate of Soda . . . . .	.105 "
Chloride of Sodium . . . . .	.056 "
Silica, Iron, and Alumina . . . . .	.245 "
	<hr/>
	14.868 "

DRIBURG (Westphalia). Altitude 583'. Mean temperature 48.5° F. Rather strong chalybeate. Temperature 51° F. Contains 40 grains in 16 oz., chiefly Bicarbonate of Lime, Sulphates of Lime, Magnesia and Soda, and 17 grains of Carbonic Acid; the quantity of Iron not stated.

EILSEN (Northern Germany). Altitude 250'. Sulphureous springs.
Useful in gout, rheumatism, and paralysis.

Dumesnil's Analysis in 16 oz. Troy = 7680 grs. :—

Temperature 59° F.	Georgen- brunnen	Jullanen- quelle.
Sulphate of Soda	5.8233	5.0873 grains.
Sulphate of Lime	15.2840	17.1933 "
Sulphate of Magnesia	5.0120	4.4933 "
Carbonate of Lime	2.3333	1.5413 "
Carbonate of Magnesia . . . . .	.1620	.1866 "
Chloride of Magnesium	1.2940	2.0500 "
Phosphate of Lime . . . . .	.0067	.0080 "
Peroxide of Iron . . . . .	.0066	.0080 "
Silica	traces	.0746 "
	<hr/>	
	30.0051	30.6424 grains.

Gases.

Sulphuretted Hydrogen	1.5740	2.096 c. in.
Carbonic Acid	1.4480	2.151 "
Nitrogen . . . . .	.3166	.374 "
Carburetted Hydrogen . . . . .	.0833	.110 "
Oxygen . . . . .	.0786	.080 "
	<hr/>	
	3.5005	4.811 c. in.

EMS (on the Lahn, Germany). Altitude 291'. Air soft and balmy. Temperature steady.

Most useful in diseases of mucous membranes and uterine derangements, especially in barrenness, sluggish liver, and irritative dyspepsia.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :-

	Krähnehen. Temperature 85° F.	Kessel- brunnen. 115° F.	Fürsten- brunnen. 96° F.	Neu- quelle. 117° F.	
Bicarbonate of Soda	14·8376	15·1974	15·6031	15·93	grs.
Chloride of Sodium	7·0841	7·7705	7·5509	7·27	"
Sulphate of Soda	·1377	·0061	·1550	·10	"
Sulphate of Potash	·3286	·3937	·3014	·43	"
Bicarbonate of Lime	1·7246	1·8129	1·7760	1·78	"
Bicarbonate of Magnesia	1·5051	1·4360	1·5357	1·54	"
Bicarbonate of Iron	·0166	·0278	·0203	·03	"
Bicarbonate of Manganese	·0073	·0047	·0060	·01	"
Bicarbonate of Baryta	·0011	·0036	·0021	·002	"
Bicarbonate of Strontia	·0032	·0096	·0033	·009	"
Phosphate of Alumina	·0032	·0096	·0033	·009	"
Silica	·3797	·3648	·3777	·37	"
Total	26·0259	27·0272	27·3322	27·67	grs.
Carbonic Acid	8·3249	6·7886	6·9275	6·52	c. in.

Imported.

ENGHIEN (Paris). Altitude 52'. A valuable sulphureous water. Has five principal sources, Cotte, Deyeux, Péligot, Boulard, De la Pêcherie. Temperature from 50° to 57° F. The climate is not equal to the Pyrenees. Open from March to October. Imported.

FACHINGEN (Nassau, on the Lahn). Altitude 337'.

To correct acid in the stomach, and useful in diseases of kidney and bladder.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. Temperature, 50° F.

Bicarbonate of Soda	28·0883	grains.
Bicarbonate of Lime	2·8960	"
Bicarbonate of Magnesia	2·2912	"
Bicarbonate of Iron	·1103	"
Bicarbonate of Strontia	·0008	"
Bicarbonate of Lithia	·0006	"
Sulphate of Soda	·1372	"
Phosphate of Soda	·0506	"
Phosphate of Lithia	·0002	"
Phosphate of Lime	·0004	"
Phosphate of Alumina	·0003	"
Phosphate of Silica	·2610	"
Fluoride of Calcium	·0027	"
Chloride of Sodium	4·5574	"
Chloride of Calcium	·0031	"
	38·3918	grains.

Gases.

Carbonic Acid	32·9750	c. in.
Nitrogen	·0256	"

33·0006 c. in.

Imported.

FRANZENSBAD (Bohemia). Altitude 1569'. Mean annual temperature 45° F.

For drinking and for baths. Highly successful in all forms of abdominal plethora, anæmia, and chlorosis. The moor-bath chalybeate for rheumatism and gout.

<i>Analysis of 16 oz. :—</i>	Wiesen-		Sabe-
	Temperature, Fahr.	quelle. 51°	quelle. 52·6°
Carbonate of Iron		·376	·016 grains.
Carbonate of Manganese		·093	·004 "
Sulphate of Soda	25·223		17·933 "
Sulphate of Potash		·1362	0 "
Phosphate of Soda		·062	0 "
Chloride of Sodium	9·346		9·216 "
Bromide of Sodium		traces	0 "
Iodide of Sodium			
Carbonate of Magnesia		1·190	·132 "
Carbonate of Lithia		·063	0 "
Carbonate of Lime		1·291	1·607 "
Carbonate of Strontia		·049	·003 "
Phosphate of Lime and Alumina		·007	·004 "
Silica		·056	·333 "

45·108 38·568 grains.

Carbonic Acid 45·107 26·89 c. in.

	Franzens-		Kalte-	Louisen-
	Temperature, Fahr.	quelle. 52·9°	Sprudel. 51°	quelle. 53·9°
Carbonate of Iron		·23	·200	·328 grains.
Carbonate of Manganese		·04	·004	0 "
Chloride of Sodium	9·23		8·600	6·766 "
Sulphate of Soda	24·50		26·930	21·416 "
Carbonate of Soda	5·17		7·173	5·498 "
Carbonate of Lime	1·82		1·600	1·600 "
Carbonate of Strontia	·003		·001	0 "
Carbonate of Magnesia	·67		·013	0 "
Carbonate of Lithia	·08		0	0 "
Phosphate of Lime and Magnesia	·032		·028	0 "
Silica	·47		·56	·228 "

42·18 44·606 35·836 grains.

Gas.

Carbonic Acid 40·84 39·4 32·53 c. inches.

FRANZ JOSEF (Buda-Pesth). A palatable aperient water, rich in salts of Magnesium and Sodium, especially the Sulphates. Dose, from half to two wineglassfuls as an alterative and aperient.

FRIEDRICHSHALL (Saxe-Meiningen, near Hildburghausen). Situated in a charming valley. Altitude 920'. Bitter water. Alterative and aperient; used in diseases of the stomach, liver, and urinary organs.

Liebig's Analysis of 16 oz. Troy = 7680 grains :—

Sulphate of Soda	46·51 grains.
Sulphate of Magnesia	39·55 "
Chloride of Sodium	61·10 "
Chloride of Magnesium	30·25 "
Bromide of Magnesium	·37 "
Sulphate of Potash	1·52 "
Sulphate of Lime	10·34 "
Carbonate of Lime	·11 "
Carbonate of Magnesia	1·16 "
Silica	·33 "

190·25 grains.

Carbonic Acid 5·32 c. in.

Imported.

GASTEIN (Austria). Altitude 3051', surrounded by mountains. Mean summer temperature, 59° F. Specially useful in nervous exhaustion.

Chiefly used for bathing. Season, July and August.

Wolf's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, from 95° to 118° Fahr.	
Sulphate of Soda	1·51 grains.
Chloride of Sodium	·36 "
Carbonate of Lime	·36 "
Silica	·24 "
Carbonate of Soda	·04 "
Phosphate of Alumina	·01 "
Carbonate of Iron	·05 "
Carbonate of Manganese	·02 "
Sulphate of Potash	·01 "
Carbonate of Magnesia	·02 "
Fluoride of Calcium	traces
Strontia	traces
Organic Matter	traces

<i>Gases.</i>	
Nitrogen	2·68 grains.
Oxygen	69·112 per cent.
	30·888 "

GEROLSTEIN (Rhenish Prussia). Altitude 1200'.

Analysis of 1 litre (35 fluid oz.) :—

Carbonate of Soda	·820436 grammes.
Carbonate of Lithia	·001030 "
Carbonate of Lime	·571430 "
Carbonate of Baryta	·000089 "
Carbonate of Magnesia	·456624 "
Carbonate of Iron	·000316 "
Carbonate of Manganese	·000167 "
Sulphate of Potash	·002868 "
Sulphate of Soda	·102627 "
Chloride of Sodium	·251034 "
Bromide of Sodium	·000210 "
Iodide of Sodium	·000002 "
Phosphate of Soda	·000221 "
Silicic Acid	·083204 "
	2·290258 "

Carbonic Acid in combination with Carbonates as Bicarbonates.)	·831988 "
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Imported and drunk as a table water.

GUBER (Srebrenica, Bosnia). A natural arsenious and ferruginous water, useful in Anæmia and Chlorosis. Dose, from one teaspoonful to two table-spoonfuls, according to age.

Ludwig's Analysis of 10,000 parts of water by weight :—

Chloride of Sodium	0·017
Sulphate of Potassium	0·166
Sulphate of Sodium	0·037
Sulphate of Calcium	0·209
Sulphate of Magnesium	0·219
Sulphate of Protoxide of Iron	3·734
Sulphate of Manganese	0·009
Sulphate of Zinc	0·078
Sulphate of Aluminium	2·277
Free Sulphuric Acid	0·093
Acid Phosphate of Calcium	0·010

Anhydrous Arsenious Acid	0.061
Anhydrous Silicic Acid	0.648
Lithium and Copper	traces
Organic substances	0.074

Total of solid constituents . . . 7.539

HOMBURG (Central Germany). Altitude 600'. Air pure and bracing.

The springs are laxative, slightly tonic, and useful in plethora, dyspepsia, hysteria, hypochondria, etc. Source Louis, discovered in 1855, contains iron and sulphur, 32 grains of salts, and 38 cubic inches of carbonic acid. The water is also used for baths. Ludwigs-brunnen is a pleasant drinking water. Both the Kaiser-brunnen and the Stahl-brunnen have a chalybeate taste. Open all the year. Season, May to September.

Liobig and Hofmann's Analysis of 16 oz. Troy = 7680 grs. :-

	Elizabeth- brunnen. 50°	Kaiser- brunnen. 52.25°	Ludwigs- brunnen. 53.3°	Stahl- brunnen. 50°	
Chloride of Sodium	79.15	104.94	47.96	79.86	grs.
Chloride of Potassium	0	.28	1.71	.18	"
Chloride of Magnesium	7.79	8.52	3.06	5.33	"
Chloride of Calcium	0	17.50	7.28	10.67	"
Carbonate of Iron . . . . .	.46	.53	.42	.94	"
Sulphate of Lime	0	.17	.15	.15	"
Carbonate of Lime	10.99	.68	5.74	7.53	"
Carbonate of Magnesia	2.01	0	.10	0	"
Sulphate of Soda . . . . .	.38	0	0	0	"
Silica . . . . .	.32	.09	.20	.31	"
	108.87	132.71	66.63	104.97	grs.
Free Carbonic Acid	48.64	109.16	43.59	46.91	c. in.

Imported. Also the Salt evaporated to dryness imported.

HUNYADI-JANOS (See BUDA-PESTH).

ISCHIA (South Italy). Principal spring, Gurgitello. Temperature 158° F. Contains in 16 oz. Troy = 7680 grs., 135 grains, chiefly chloride of sodium, carbonate of soda, and carbonic acid. Serviceable in such cases as hot baths are usually employed, rheumatism, paralysis, skin diseases, etc. Season, in the spring and summer. Whey cure.

Saline springs and sand baths. Temperature 108° to 133° F. Patients are immersed in these for rheumatism, gout, palsy, and scrofula.

ISCHL (Austria). Altitude 1400'. Air peculiarly soft and refreshing, and is its chief attraction. The brine from the salt-works, when diluted, is used for baths. Season, May to end of September.

JODBAD LIPIK (Slavonia, Hungary). Altitude 550'.

This is a hot Iodine Thermal Spring water, issuing at a temperature of 152.6° F. Its medicinal value is very great, and is chiefly useful in catarrhal affections of the mucous membranes of the stomach and bowels, as also in the various forms of Gout, Rheumatism, &c.; for affections of the kidneys; and in cases of swelling of the glands, &c.

Heller's and Lengyel's Analysis of 10,000 parts of the water :-

Sulphate of Potash	2.001
Sulphate of Soda	2.193
Chloride of Sodium	6.154
Iodide of Sodium	0.209
Bicarbonate of Soda	19.476
Bicarbonate of Magnesium	1.530
Bicarbonate of Lime	1.148
Bicarbonate of Iron	0.160
Silica	0.456
	33.327
Carbonic Acid	10.434

JOHANNISBRUNNEN (Hesse-Nassau). A clear water, stimulates the functions of the mucous membranes, and quickens the circulation of the blood. It is an excellent tonic and table water, alone or mixed with wine or cognac.

Plaskuda's Analysis of 16 oz. :—

Bicarbonate of Soda	2·5578 grains.
Bicarbonate of Potash	·0912 ..
Bicarbonate of Lithia	·0088 ..
Bicarbonate of Lime	5·1823 ..
Bicarbonate of Magnesia	2·1267 ..
Bicarbonate of Protoxide of Iron	·0068 ..
Bicarbonate of Protoxide of Manganese	·0145 ..
Chloride of Sodium	7·1603 ..
Sulphate of Soda	·2079 ..
Silicic Acid	·0791 ..
Total Solid Constituents	17·4360 ..
Free Carbonic Acid	17·0667 ..

KISSINGEN (Bavaria). Altitude 800'. Climate mild, dry, and salubrious. Pleasing and healthful place of residence.

The waters are laxative, and used in indigestion, obstructions of the liver, and morbid conditions of the kidneys, giving tone to the organs. The season lasts four months, May to September. There is also a Kissingen bitter-wasser, which closely resembles Friedrichshall.

Liebig's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, Fahr.	Rakoezi. 51°	Pandur. 51°	Maxbrunnen. 49°
Chloride of Sodium	44·71	42·39	17·52 grains.
Chloride of Potassium	2·20	1·85	1·14 ..
Chloride of Lithium	·15	·12	·004 ..
Chloride of Magnesium	2·33	1·62	·51 ..
Bromide of Sodium	·06	·05	0 ..
Iodide of Sodium	traces	traces	0 ..
Nitrate of Soda	·07	·02	·65 ..
Sulphate of Magnesia	4·50	4·59	0 ..
Sulphate of Lime	2·99	2·30	1·06 ..
Phosphate of Lime	·04	·04	·03 ..
Carbonate of Lime	8·14	7·79	4·62 ..
Carbonate of Iron	·24	·20	0 ..
Silica	·09	·03	·07 ..
	65·70	61·30	28·10 grains.
<i>Gases.</i>			
Carbonic Acid	41·77	48·17	41·85 c. in.
Ammonia	·007	·029	0 ..

Imported.

KOSEN (Saxony, in a valley sheltered from the N. and N.E. winds).

Baths. Useful in scrofulosis.

Analysis of 16 oz. Troy = 7680 grs. :—

	Temperature, Fahr. 65°.
Chloride of Sodium	335·0 grains.
Sulphate of Soda	2·2 ..
Sulphate of Potash	2·4 ..
Sulphate of Lime	33·5 ..
Carbonate of Lime	1·0 ..
Sulphate of Magnesia	7·9 ..
Oxide of Iron	0·1 ..

382·1 grains.

KÖNIGSDORFF-JASTRZEMB (Upper Silesia). Not much known.
Drunk for glandular enlargements.

Analysis of 16 oz. Troy = 7680 grs. :—

Chloride of Sodium	87.9	grains.
Chloride of Potassium	0.5	"
Chloride of Calcium	4.25	"
Chloride of Magnesium	2.6	"
Iodide of Magnesium . . . . .	.04	"
Bromide of Magnesium . . . . .	.22	"
Carbonate of Lime . . . . .	.33	"
Carbonate of Magnesia . . . . .	.01	"
Carbonate of Iron . . . . .	.03	"
Sulphate of Lime . . . . .	.08	"

95.96 grains.

KRANKENHEIL (Bavaria). Altitude 2467'. Climate pure, bracing, and mild.
Useful in scrofulous diseases of the skin.

Analysis of 16 oz. Troy = 7680 grs. :—

	Johann-Georgen- quelle.	Bernhard- quelle.	Anna- quelle.
Sulphate of Potash . . . . .	.09	.07	.15 grains.
Sulphate of Soda . . . . .	.09	.03	2.25 "
Chloride of Sodium	1.79	2.27	.23 "
Iodide of Sodium . . . . .	.01	.01	— "
Bicarbonate of Soda	2.48	2.56	1.49 "
Bicarbonate of Lime . . . . .	.70	.78	1.91 "
Bicarbonate of Magnesia . . . . .	.22	.22	— "
Bicarbonate of Iron	—	—	— "
Bicarbonate of Manganese	—	—	— "
Silicate of Alumina . . . . .	.02	.01	1.84 "
Silicic Acid . . . . .	.06	.07	.03 "

Gases.	5.50	5.07	7.98 grains.
Free Carbonic Acid . . . . .	.32	.23	.63 c. in.
Sulphuretted Hydrogen . . . . .	.05	.07	.23 "

KREUZNACH (Rhenish Prussia). Altitude 285'. Climate warm, clear, and dry.
Kreuznach Salt: the Mother Lye of Kreuznach, which remains after the salt
has crystallised out, contains 2484 grains of solids in the 16 oz.
A strongly iodised water, powerfully tonic and stimulant to the lymphatic
system, used for constitutional syphilis, diseases of the skin, rheumatism,
paralysis, scrofula, tuberculosis, and leucorrhœa; used also for baths. Season
from June to September.

Analysis of 16 oz. Troy = 7680 grs. :—

	Elisen- quelle. 54.5°	Oranien- quelle. 54.5°	Brine- Spring.
Temperature, Fahr.	72.883	108.705	1311.89 grains.
Chloride of Sodium	13.389	22.749	241.00 "
Chloride of Calcium	4.071	0	73.22 "
Chloride of Magnesium . . . . .	.624	.460	11.23 "
Chloride of Potassium . . . . .	.613	0	0 "
Bromide of Magnesium . . . . .	.278	1.780	5.00 "
Iodide of Magnesium . . . . .	.035	.012	.63 "
Carbonate of Lime	1.693	.255	0 "
Carbonate of Magnesia . . . . .	.106	.130	0 "
Carbonate of Iron	0	.356	0 "
Silica . . . . .	.129	.999	0 "
Phosphate of Alumina . . . . .	.025	.095	0 "

93.846 135.541 1642.97 grains.

The water, the salt, and the brine are all imported.

KRONDORF (Austria). A sparkling table water, may be drunk *ad lib.* It induces a healthy condition of the mucous membrane of the stomach, and acts as a powerful aid to digestion. Is useful in gout, and as a diuretic.

Gintl's Analysis of 10,000 grammes :—

Bicarbonate Oxide of Kalium	1·63071 grammes.
Bicarbonate Oxide of Natrium	11·48577 "
Bicarbonate Oxide of Lithium	0·10226 "
Bicarbonate Oxide of Magnesium	5·79363 "
Bicarbonate Oxide of Calcium	4·90714 "
Bicarbonate Oxide of Strontium	0·00580 "
Bicarbonate Protoxide of Manganese	0·04696 "
Bicarbonate Protoxide of Iron	0·07376 "
Sulphuric Oxide of Kalium	0·04363 "
Sulphuric Oxide of Natrium	0·12769 "
Chloride of Potassium	0·05180 "
Chloride of Sodium	0·17720 "
Phosphoric Oxide of Calcium	0·02488 "
Fluoride of Calcium	0·00513 "
Argillaceous Earth	0·04000 "
Silicic Acid	0·08010 "
Organic Substances	0·08020 "
Total of all the components of the Residuum	24·77666 "
Anhydrous Carbonic Acid	27·73322 "
Total of all the constituents	52·50988 "

KRONENQUELLE (Obersalzbrunn, Silesia). It is useful in the treatment of nephritic and arthritic affections, and gouty diathesis. One or two bottles are to be taken daily, and wines and spirits avoided, or taken in limited quantity.

Poleck's Analysis of 16 oz. :—

Chloride of Sodium	·4129 grains.
Sulphate of Soda	1·2607 "
Sulphate of Potash	·2860 "
Bicarbonate of Soda	6·1084 "
Bicarbonate of Lithia	·0798 "
Bicarbonate of Lime	4·9884 "
Bicarbonate of Magnesia	2·8333 "
Bicarbonate of Strontia	·0196 "
Bicarbonate of Protoxide of Manganese	·0126 "
Bicarbonate of Protoxide of Iron	·0639 "
Phosphate of Alumina	·0025 "
Alumina	·0032 "
Silicic Acid	·2422 "
Total solid constituents	16·3139 "

Free Carbonic Acid (at 50° Fahr. and Bar. 30) in 1000 parts by volume 84·94 parts.

KRONTHAL (Nassau). Altitude 512'. In a valley open to the south. Climate very mild.

Resorted to by persons suffering from bronchitis or affections of the lungs.

Live's Analysis of 16 oz. Troy = 7680 grs. :—

	Stahl- quelle. Temperature, Fahr. 57°	Wilhelms- quelle. 61°
Chloride of Sodium	22·27	27·20 grains.
Chloride of Potassium	·77	·67 "
Chloride of Ammonium	·07	·04 "
Chloride of Calcium	·07	·16 "
Carbonate of Lime	4·17	5·10 "
Sulphate of Lime	·21	·23 "
Carbonate of Magnesia	·72	·72 "
Carbonate of Iron	·05	·10 "
Carbonate of Manganese	·02	·01 "
Silica	·66	·55 "
Organic Matter	·11	·01 "
	29·16	35·26 grains.
Carbonic Acid	40·0	33·0 c. in.

LABASSÈRE (Hautes-Pyrénées). Altitude 1800'.

Drunk for bronchial and laryngeal catarrh.

Containing 3·68 grains of solids in 16 oz. Troy = 7680 grs., viz. :—

	Temperature, 54°—57° Fahr.
Sulphuret of Sodium	·35 grains.
Chloride of Sodium	1·58 "
Chloride of Potassium	·02 "
Carbonate of Soda	·17 "
Silicate of Lime	·33 "
Silicate of Magnesia	·07 "
Alum (in excess)	·01 "
Iodine	traces.
Organic Matter	1·11 "

LANDECK (Prussian Silesia). Altitude 1398'. Climate bracing.

Vapour inhaled for bronchial catarrh. Resembles in purity Buxton and Clifton. There are moor-baths for rheumatism, etc.

Fischer's Analysis of 16 oz. Troy = 7680 grs. :—

	Wiesen- quelle. 81° F.	Georgen- brunnen. 83° F.
Sulphate of Soda	·542	·248 grain.
Bicarbonate of Soda	·545	0 "
Chloride of Potassium	0	·165 "
Chloride of Sodium	·005	0 "
Chloride of Calcium	·064	0 "
Crenate of Soda	0	·286 "
Sulphate of Lime	0	·008 "
Carbonate of Lime	·075	·081 "
Carbonate of Magnesia	·005	·009 "
Phosphate of Alumina, Iron, and Manganese	0	·012 "
Silica	·327	·271 "
	1·563	1·122 grains.
<i>Gases.</i>		
Sulphuretted Hydrogen	·015	traces. c. in.
Carbonic Acid	·172	·26 "
Nitrogen	0	·62 "

LANGENBRÜCKEN (Baden). Altitude 440'. In a valley, with luxuriant foliage. Climate mild. Season, spring to autumn.

Useful in chronic catarrh of the bladder, rheumatism, and bronchial irritation.

TRINKQUELLE. Temperature, 52° Fahr. Contains 3 $\frac{1}{2}$ grains of solids in 16 oz.

Troy = 7680 grs. viz. :—

Sulphate of Soda . . . . .	.25 grains.
Sulphate of Lime . . . . .	.5 "
Sulphate of Potash . . . . .	.15 "
Chloride of Sodium . . . . .	.08 "
Carbonate of Lime	2.12 "
Carbonate of Magnesia . . . . .	.35 "
Carbonate of Iron . . . . .	.07 "
Silica . . . . .	.01 "

Gases.

Sulphuretted Hydrogen	0.10 c. in.
Carbonic Acid	27.98 "

WALDQUELLE. Temperature, 57° F. Contains 11 $\frac{1}{2}$ grains of solids in 16 oz.

Troy = 7680 grs. viz. :—

Sulphate of Soda	1.63 grains.
Sulphate of Magnesia	3.88 "
Sulphate of Lime	2.41 "
Phosphate of Lime . . . . .	.16 "
Sulphate of Potash . . . . .	.15 "
Sulphuret of Calcium . . . . .	.14 "
Chloride of Potassium . . . . .	.10 "
Carbonate of Lime	1.81 "
Carbonate of Magnesia	1.84 "
Sulphuret of Iron . . . . .	.03 "
Alumina . . . . .	.03 "
Silica . . . . .	.13 "

Gases.

Sulphuretted Hydrogen . . . . .	.15 c. in.
Carbonic Acid	3.09 "

LEUK (Switzerland). Altitude, 4275', at the foot of the Gemmi. Climate rough and bracing.

Both sexes, in suitable dresses, promenade in these baths. They are useful in skin diseases, chronic swellings of the glands, in catarrh, and have also a diuretic action.

Brunner's Analysis of 16 oz. Troy = 7680 grs., of the Lorenzquelle :—

Temperature, 124° F.

Sulphate of Lime	12.712 grains.
Sulphate of Magnesia	1.991 "
Sulphate of Soda . . . . .	.509 "
Sulphate of Strontia . . . . .	.031 "
Chloride of Sodium . . . . .	.055 "
Chloride of Potassium . . . . .	.02 "
Chloride of Magnesium . . . . .	.027 "
Carbonate of Lime . . . . .	.357 "
Carbonate of Magnesia . . . . .	.002 "
Carbonate of Iron . . . . .	.024 "
Silica . . . . .	.102 "

15.830 grains.

Gases.

Carbonic Acid . . . . .	.267 c. in.
Oxygen . . . . .	.192 "
Nitrogen . . . . .	.347 "

LEVICO (Austrian Tyrol). Altitude 4500'.

It has two arsenical springs, one being about ten times stronger than the other. Strong Levico contains about $\frac{1}{15}$ grain of Arsenious Acid and 33 grains of Iron salts per pint.

Ludwig von Barth's Analyses.

In one litre (35 fluid oz.) of Levico *strong* :—

Arsenious Acid	·0086879	grammes.
Chloride of Sodium	·0001781	"
Proto-sulphate of Iron	2·5675198	"
Per-sulphate of Iron	1·3019720	"
Sulphate of Aluminium	·6239873	"
Sulphate of Manganese	·0002418	"
Sulphate of Calcium	·3724983	"
Sulphate of Magnesium	·3833451	"
Sulphate of Potassium	·0037031	"
Sulphate of Sodium	·0312031	"
Sulphate of Ammonium	·0032270	"
Silicic Acid	·0310384	"
Carbon from Organic matter	·0097825	"

In one litre (35 fluid oz.) of Levico *mild* :—

Arsenious Acid	·00095	grammes.
Chloride of Sodium	·00003	"
Proto-sulphate of Iron	·66278	"
Per-sulphate of Iron	·27272	"
Sulphate of Aluminium	·15919	"
Sulphate of Copper	·00520	"
Proto-carbonate of Iron	·01558	"
Sulphate of Manganese	·00003	"
Sulphate of Magnesium	·23648	"
Sulphate of Calcium	·32477	"
Sulphate of Sodium	·01579	"
Sulphate of Potassium	·00099	"
Sulphate of Ammonium	·00062	"
Silicic Acid	·02293	"

LIPPIK (Slavonia).

Useful in hysteria.

KLEINBADQUELLE contains 20 grains of solids in 16 oz. Troy = 7680 grs., viz. :—

	Temperature 111° F.
Sulphate of Soda	5·25 grains.
Chloride of Sodium	4·8 "
Chloride of Calcium	·75 "
Iodide of Calcium	·2 "
Carbonate of Soda	9·5 "
Carbonate of Magnesia	·75 "
Carbonate of Lime	1·33 "
Phosphate of Alumina	·02 "
Silica	·08 "

Gases.

Carbonic Acid	28·5 per cent.
Nitrogen	71·4 "

LIPPSRINGE (Prussian Westphalia). Altitude 378', having beautiful walks for exercise. Climate mild, calming, and equable.

Useful in bronchial irritation and incipient tuberculosis. Season, June to August.

ARMINIUSQUELLE, in 16 oz. Troy = 7680 grs. are:—

	Temperature 70° F.
Sulphate of Lime	4·25 grains.
Carbonate of Lime	5·27 "
Sulphate of Soda	5·20 "
Bicarbonate of Soda	1·60 "
Sulphate of Magnesia	·80 "
Carbonate of Magnesia	·60 "
Carbonate of Iron	·14 "
Chloride of Sodium	·86 "
Chloride of Magnesium	·80 "
Iodides	traces.

19·52 grains.

Gases.

Carbonic Acid	16·17 c. in.
Nitrogen	4·46 "
Oxygen	·55 "

21·12 c. in.

LUCCA (Central Italy). Situate on the slope of a hill, surrounded with shady trees. Climate warm.

Employed externally and internally for skin diseases and chronic rheumatism. Season, June, July, and August.

Giulii's Analysis of 16 oz. Troy = 7680 grs. of thermal spring:—

	Temperature, 116° F.
Sulphate of Lime	5·82 grains.
Carbonate of Lime	·39 "
Carbonate of Magnesia	·06 "
Chloride of Sodium	1·28 "
Chloride of Magnesium	·32 "
Alumina	·32 "
Sulphate of Magnesia	1·18 "

9·37 grains.

LUHATSCHOWITZ (Moravia). Altitude 1600'. Climate mild but moist.

Useful in chronic bronchial, gastric, uterine, and vaginal catarrh, especially if combined with scrofulosis; in congested liver and hæmorrhoids, arising from sedentary habits.

Analysis of 16 oz.:—

	Vincenz- Amand- Johann- Luise- Bade- brunnen. brunnen. brunnen. quelle. wasser.				
	Temperature, Fahr. 47·75°	46·7°	45·7°	48·6°	
Chloride of Potassium	1·79	1·59	2·14	1·61	1·85 grains.
Chloride of Sodium	23·35	25·75	27·88	33·47	20·87 "
Bromide of Sodium	·25	·10	·07	·08	·11 "
Iodide of Sodium	·13	·12	·17	·18	·35 "
Carbonate of Soda	23·26	36·03	44·21	43·21	24·13 "
Carbonate of Lithia	0	·01	·01	·01	0 "
Carbonate of Magnesia	·42	·56	·55	·51	·42 "
Carbonate of Baryta	·07	·06	·04	·06	0 "
Carbonate of Lime	4·63	4·81	4·89	4·40	4·79 "
Carbonate of Strontia	·09	·11	·07	·12	0 "
Carbonate of Iron	·11	·13	·09	·18	·15 "
Silica	·39	·10	·41	·47	·14 "
	54·85	69·5	80·7	84·4	59·7 grains
Carbonic Acid	50·0	29·0	16·0	27·6	28·0 c. in.

MARIENBAD (Bohemia). Altitude 1900'. Air dry and pure. Season, May to September.

Springs are drunk as laxatives, and are useful in abdominal enlargement, gravel, gout, and derangement of the digestive organs. Mud-baths are applied to stimulate the skin, and to remove glandular swellings.

In 16 oz. Troy = 7680 grs. :-

	Kreuz-Ferdinand-brunnen.	Ferdinand-brunnen.	Wald-Quelle.	Wiesen-Quelle.	Marien-Quelle.
Temperature, Fahr.	53.3°		43.25°	52°-54°	
Sulphate of Soda . . .	36.269	38.766	5.228	.883	.353 grs.
Bicarbonate of Soda . . .	12.394	13.999	5.107	.704	0 "
Chloride of Sodium . . .	11.166	15.397	2.116	.369	.048 "
Sulphate of Potash . . .	.449	.499	1.495	0	0 "
Bicarbonate of Lithia . . .	.077	.110	.009	0	0 "
Bicarbonate of Lime . . .	6.630	6.021	2.725	6.516	.436 "
Bicarbonate of Strontia . . .	.017	.008	0	0	0 "
Bicarbonate of Magnesia . . .	5.399	5.299	0	4.373	.061 "
Bicarbonate of Iron . . .	.482	.653	.187	.373	.035 "
Bicarbonate of Manganese . . .	.053	.166	.035	.161	0 "
Phosphate of Alumina . . .	.054	.014	.011	0	0 "
Phosphate of Lime . . .	.018	.015	0	0	6 "
Silica . . . . .	.079	.741	.507	.691	.189 "
	73.736	81.515	20.091	14.070	1.197 grs.
Carbonic Acid	7.424	14.800	13.509	12.828	9.056 c. in.

Imported.

	Carolinen-brunnen.	Ambrosius-brunnen.
Temperature, Fahr.	50°	50°
Sulphate of Soda	2.79	1.86 grains.
Chloride of Sodium . . . . .	.82	1.64 "
Carbonate of Soda . . . . .	.20	1.66 "
Carbonate of Lime	3.66	2.89 "
Carbonate of Magnesia	3.94	2.72 "
Carbonate of Iron . . . . .	.44	.34 "
Silica . . . . .	.46	.48 "
Extractive Substance . . . . .	.38	0 "
Carbonic Acid	15.43	12.9 c. in.

MEINBERG (Germany). Altitude 634'. Situated in a charming fertile plain. These waters are generally tonic, and good in facial neuralgia, relaxed condition of system, whether cutaneous or otherwise.

In 16 oz. Troy = 7680 grs. are contained as follows :-

	Trink-Quelle.	Neu-brunnen.	Quelle im Stern.	Schwefel-Quelle.	Kochsalz-Quelle.	Acidulous Spring.
Temperature.				61° F.		
Sulphate of Soda	1.15	4.51	1.34	5.84	11.01	0 grs.
Sulphate of Magnesia	1.14	2.52	3.67	1.73	0	0.04 "
Sulphate of Lime	0.28	3.45	15.16	8.33	13.46	0.18 "
Chloride of Sodium	0	0	0	0	40.95	0.07 "
Chloride of Magnesia	0.81	0.98	0.24	1.03	6.31	0.14 "
Carbonate of Lime	1.45	2.65	1.17	2.14	6.03	5.02 "
Carbonate of Magnesia	0.15	0.24	0.17	0.17	0.51	2.04 "
Carbonate of Iron	0.08	0.07	0.01	0.008	0.07	0.005 "
Silica	0.06	0.25	0.08	0.12	0.05	0.05 "
Extractive Substance	0.57	0	0	0	0	0 "
	5.96	14.73	23.36	19.48	73.44	7.57 "
<i>Gases.</i>						
Carbonic Acid	34.36	0	1.83	2.12	9.74	18.49 c. in.
Sulphuretted Hydrogen	0	0	0	0.55	0	0 "
Nitrogen	0.14	0	0	0	0	0 "

MERGENTHEIM (Württemberg). Altitude 591'. Charming situation. Climate mild. Mean annual temperature 51° F., mean summer temperature 64° F.

The concentrated bitter-water contains 235 grains in the 16 oz. Troy = 7680 grs. The water is used internally and externally in biliary obstructions, hæmorrhoids, and lithiasis.

The "Quelle im Carlsbad" spring contains about 107 grains of solids in 16 oz. Troy = 7680 grs. viz. :—

Chloride of Sodium	51·25 grains.
Chloride of Potassium	·78 "
Chloride of Lithium	·01 "
Bromide of Sodium	·07 "
Sulphate of Soda	21·89 "
Sulphate of Magnesia	15·88 "
Sulphate of Lime	9·86 "
Carbonate of Magnesia	1·40 "
Carbonate of Lime	5·45 "
Carbonate of Iron	·05 "
Silica	·45 "

107·16 grains.

Gases.

Carbonic Acid	7·5 c. in.
Nitrogen	18·0 "

MONDORF (Luxembourg). Altitude 2278'. Surrounded by beautiful shady walks.

Extremely useful in hyperæmic conditions of the mucous membrane of the respiratory or intestinal functions, especially in leuco-phlegmatic anæmic individuals.

There is an artesian well here, 2278 feet deep, and the water out of it is 108·5° F.

Kirchhoff's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 77° Fahr.

Chloride of Sodium	66·98 grains.
Chloride of Calcium	24·31 "
Chloride of Potassium	1·58 "
Chloride of Magnesium	3·25 "
Bromide of Magnesium	·76 "
Sulphate of Lime	12·61 "
Carbonate of Magnesia	·05 "
Carbonate of Iron	·22 "
Silica	·05 "
Arsenic Acid	·001 "

109·911 grains.

Gases.

Free Carbonic Acid	1·06 c. in.
Nitrogen	·47 "

NENNDORF (Prussian Westphalia). Environs charming.

Used for drinking and for baths, to increase the tone of the skin. Gas, douche, and mud baths are employed for gout and rheumatism, etc. Brine baths are also employed. Season, June to September.

In 16 oz. Troy = 7680 grs. :—

Temperature, 52° F.	Quelle unter dem Gewölbe.	Trinkbrunnen.	Badequelle.	Sool of Rodenberg.
Sulphate of Soda . . .	5·22	4·91	1·11	10·81 grs.
Sulphate of Magnesia . .	2·83	2·54	1·89	10·01 "
Sulphate of Lime . . .	7·15	6·31	5·56	14·82 "
Sulphate of Potash . . .	0	0	0	0·10 "
Chloride of Sodium . . .	0	0	0	49·84 "
Chloride of Magnesium . .	1·63	1·62	0·42	10·01 "
Chloride of Calcium . . .	4·30	4·51	3·18	4·61 "
Silica	0·05	0·06	0	0·20 "
	21·4	20·7	12·19	90·0 grs.

Gases.

Carbonic Acid	5·2	4·32	2·75	0·14 c. in.
Sulphuretted Hydrogen . .	1·21	1·20	0·61	0 "

NEUENAHN (Rhenish Prussia). Altitude 225'. Scenery picturesque and romantic. Climate mild.

Good for gout and rheumatism, scrofula, emphysema of the lungs, bronchial catarrh, uric acid diathesis, and all diseases of the mucous membrane.

Contents in 16 oz. Troy = 7680 grains :—

Temperature, Fahr.	Angusten- quelle. 90°	Möhr- Marien- sprudel. 102°	Bisch. Apollinaris- brunnen. 70°	Victoria- quelle.
Carbonate of Soda	5·99	5·62	9·65	10·80 grs.
Carbonate of Magnesia . .	1·77	2·68	3·39	3·74 "
Carbonate of Lime	1·68	1·61	·45	3·30 "
Chloride of Sodium	·71	·69	3·57	0·91 "
Sulphate of Soda	·58	·76	2·30	0·73 "
Oxide of Iron	·04	0·06	0·15	0·10 "
Alumina	·13			
Silica	·17	0·19	0·06	0·25 "
	11·11	11·66	19·59	19·83 grs.
Carbonic Acid	24·73	22·52	47·04	12·86 c. in.

Apollinaris is imported for drinking as a table water.

OBERSALZBRUNN (Salzbrunn, Silesia). A lithiated water, useful in nephritic affections and gouty diathesis.

Constituents in 1000 parts by weight of water. Carbonate salts reckoned as anhydrous bicarbonates :—

	OBER- BRUNNEN.		MÜHL- BRUNNEN.	NEU- QUELLE.
	Valentiner. 1866.	Ziurek. 1869.	Valentiner. 1866.	Ziurek. 1869.
Bicarbonate of Soda	2·4240	2·2264	1·8033	1·2855
Chloride of Sodium	0·1719	0·1982	0·0856	0·1025
Sulphate of Soda	0·4773	0·2332	0·3408	0·4018
Bicarbonate of Lithia	0·0138	0·0071	0·0077	0·0083
Bicarbonate of Magnesia . . .	0·5044	0·3916	0·5823	0·6148
Bicarbonate of Lime	0·4781	0·5052	0·5843	0·5472
Bicarbonate of Strontia . . .	0·0047	trace.	0·0088	trace.
Bicarbonate of Oxide of Iron .	0·0003	0·0171	0·0011	0·0307
Sulphate of Potash	0·0268	0·3519	0·0081	0·0025
Silicic Acid	0·0255	0·0331	0·0323	0·0391
Total Solid Constituents . .	4·1268	3·9638	3·4543	3·0324
	cc.	cc.	cc.	cc.
Volume of Free Carbonic Acid Gas in 1000 cubic centimetres of water . . . }	630·49	370·58	626·84	646·42
Temperature	7·5° Cent. 36·1° Fahr.	—	6·3°-7·5° Cent. 35·5°-36·2° F.	

OREZZA (Corsica). Air warm. Temperature, 59° F.

Is a kind of ferruginous Seltzer Water, very agreeable to drink. It is drunk with pleasure and with benefit for indigestion, want of appetite, and general debility.

Analysis of 1000 grammes:—

Carbonate of Lime	·602 grammes.
Carbonate of Magnesia	·074 "
Carbonate of Protoxide of Iron	·128 "
Sulphate of Lime	·021 "
Chloride of Potash	·014 "
Chloride of Soda	·006 "
Aluminium	·004 "
Silicic Acid	·004 "

·849 grammes.

Free Carbonic Acid 1·248 litres.
Imported.

OTTILIENQUELLE (Paderborn, Westphalia).

For incipient tuberculosis, great emaciation, etc.; in short, they are both tonic and restorative.

Analysis of 16 oz. Troy = 7680 grains:—

Carbonate of Lime	2·5 grains.
Carbonate of Iron	·05 "
Chloride of Sodium	6·75 "
Sulphate of Lime	·5 "
Chloride of Calcium	·5 "
Chloride of Magnesium	·25 "
Iodine and Bromine	traces.

10·55 grains.

Gases.

Carbonic Acid	2·34 c. in.
Nitrogen	8·98 "
Oxygen	1·17 "

MARIENQUELLE (in the neighbourhood), a chalybeate, contains 4½ grains of solids. Amongst them—

Carbonate of Lime	1·75 grains.
Bicarbonate of Iron	·45 "

PFAFFERS (Switzerland), altitude 2108', and RAGATZ, altitude 1604', which has the same water conveyed to it.

Pfaffers is situated in a ravine, and is the most valued; Ragatz is in an open country, with purer air. They are chiefly valued for the warmth of their springs. Season, June to September.

Capeller's Analysis of 16 oz. Troy = 7680 grains:—

Temperature, 100° F.

Carbonate of Magnesia	·87 grains.
Carbonate of Lime	·32 "
Sulphate of Soda	·62 "
Sulphate of Lime	·37 "
Chloride of Sodium	·21 "
Chloride of Magnesium	·16 "

Gases.

Oxygen	2·55 grains.
Nitrogen	1·3 c. in.
Carbonic Acid	3·7 "
	4·15 "

PLOMBIÈRES (Vosges, France). Altitude 1310'. Air bracing and pure, subject to change of temperature.

Chiefly used as baths, and Dr. Hebra's beds are used to keep patients immersed for days together: most suitable for gout, rheumatism, spinal, and female complaints. There are, also, cool chalybeate springs for drinking. Often visited by the late Emperor Napoleon III.

Analysis of 16 oz. Troy=7680 grs.:—

	Bain des Dames.	Bain Romain.
Temperature, from 80° to 159° F.		
Silicate of Soda	·6257	·5278 grain.
Silicate of Potash	·0080	0 "
Silicate of Lime and Magnesia	·1530	·052 "
Chloride of Sodium	·2754	·2290 "
Chloride of Calcium		
Sulphate of Soda	·6273	·3901 "
Arsenate of Soda	·0053	0 "
Silica	·0887	·3213 "
Alumina	·0760	·1980 "
Nitrogenous organic matter	·1530	0 "
	2·0024	1·6759 grains.

Imported.

POUGUES (Loire, France). Altitude 780'.

Analysis of 1 Litre (35 fluid oz.):—

"St. Leger" Spring.

Bicarbonate of Lime	1·3269 grammes.
Bicarbonate of Magnesia	·9762 "
Bicarbonate of Soda with traces of Potash	·6362 "
Bicarbonate of Iron	·0206 "
Sulphate of Soda	·2700 "
Sulphate of Lime	·1900 "
Chloride of Magnesium	·3500 "
Silicic Acid and Alumina	·0350 "
Glairine	·0300 "

3·8349 grammes.

PULLNA (Bohemia).

A bitter saline purgative, twice the strength of Seidlitz, useful in obstinate constipation.

Struve's Analysis of 16 oz. Troy = 7680 grs.:—

Sulphate of Soda	123·800 grains.
Sulphate of Potash	4·800 "
Sulphate of Lime	2·600 "
Carbonate of Lime	·770 "
Sulphate of Magnesia	93·086 "
Chloride of Magnesium	16·666 "
Carbonate of Magnesia	6·406 "
Phosphate of Lime	·003 "
Silica	·176 "

248·307 grains.

Carbonic Acid Gas.

Imported.

PYRMONT (Waldeck). Altitude 404'. In a valley; the environs picturesque.

Mean annual temperature, 48.5° F.

Chalybeate drinking springs, taste fresh and slightly ferruginous. The saline somewhat bitter; they are highly restorative. There is also a Grotto del Cane here.

Wigger's Analysis of 16 oz. Troy = 7680 grs. :-

Temperature, 51°-54½° F.	Trink- quelle.	Brodel- brunnen.	Augen- quelle.	Neu- brunnen.	Seel- quelle.	Myr. Sal- quelle.	Säur- ling.
Sulphate of Lime . . .	7.22	6.07	4.10	0	14.58	5.51	.31 grs.
Sulphate of Magnesia . . .	2.69	5.53	4.56	3.47	2.33	0	.60 "
Sulphate of Soda . . .	2.14	0	1.71	7.34	5.29	12.24	.37 "
Carbonate of Lime . . .	5.98	4.52	3.81	7.86	2.71	6.92	1.81 "
Carbonate of Magnesia . . .	.32	.24	.25	.96	.46	0	.16 "
Carbonate of Soda . . .	0	4.78	.84	2.62	1.49	6.23	.30 "
Carbonate of Iron . . .	.49	.58	.13	.75	.08	0	0 "
Chloride of Sodium . . .	0	0	.44	4.38	61.68	65.49	.01 "
Chloride of Magnesium . . .	1.12	1.48	.45	.97	6.92	12.07	.12 "
Silica . . . . .	.49	.25	.10	.20	0	0	0 "
	20.02	23.62	16.46	28.98	95.32	108.7	3.72 grs.
Carbonic Acid . . .	44.52	38.51	36.28	39.28	17.46	26.19	21.84 c. in.
Sulphuretted Hydrogen 0	0	0	.39	0	0	0	0

Imported.

RAKOCZI (See KISSINGEN), Bavaria.

RECOARO (Venetia). Altitude 1465'. Climate mild and bracing.

Situate at the foot of the Alps. Chiefly resorted to for the mild air and chalybeate springs. Season, May to October.

Cenedolla's Analysis of 16 oz. Troy = 7680 grs. :-

Carbonate of Iron . . . . .	.23 grains.
Carbonate of Lime	5.15 "
Carbonate of Magnesia . . . . .	.47 "
Carbonate of Soda	0 "
Sulphate of Magnesia	5.00 "
Sulphate of Soda . . . . .	.23 "
Sulphate of Lime	9.5 "
Chloride of Magnesium . . . . .	.023 "
Silica . . . . .	.319 "

Gas.

Carbonic Acid 20.78 grains.
17.99 c. in.

REICHENHALL (Upper Bavaria). Altitude 1407'. Mean temperature of spring, 56° F.; of summer, 64° F.; of autumn, 54° F. Climate mild and bracing.

Used only for baths, for scrofula and incipient tuberculosis, and for inhalation. Season, July and August.

Of the nineteen saline springs, the most abundant is

The "EDELQUELLE," which contains in 16 oz. Troy = 7680 grs. :-

Chloride of Sodium	1723.10 grains.
Chloride of Ammonium . . . . .	.19 "
Chloride of Magnesium	13.84 "
Bromide of Magnesium . . . . .	.23 "
Sulphate of Soda	15.36 "
Sulphate of Potash	4.70 "
Sulphate of Lime	31.98 "
Carbonate of Lime . . . . .	.07 "
Carbonate of Magnesia	traces.
Oxide of Iron and Alumina . . . . .	.06 "
Silica . . . . .	.08 "

Free Carbonic Acid 1789.61 grains.
traces.

RIPPOLDSAU (Baden). Altitude 1886'. Air pure, fresh, and bracing.

Tonic resolvent for chlorotic and anæmic patients; also useful in pulmonary catarrh. Season, middle of May to middle of September.

Bunsen's Analysis of 16 oz. Troy = 7680 grs. :—

	Joseph- quelle. 46°	Leopolds- quelle. 49°
Bicarbonate of Iron . . . . .	.395	.455 grains
Bicarbonate of Manganese . . . . .	.033	.078 "
Bicarbonate of Lime	12.939	14.598 "
Bicarbonate of Magnesia . . . . .	.543	2.888 "
Sulphate of Soda	9.316	6.789 "
Sulphate of Potash . . . . .	.465	.271 "
Sulphate of Lime . . . . .	.428	.134 "
Sulphate of Magnesia	1.866	.150 "
Phosphate of Lime	0	.136 "
Chloride of Magnesium . . . . .	.650	.336 "
Alumina . . . . .	.034	.120 "
Silica . . . . .	.439	.663 "
Phosphoric Acid	traces.	traces.
Arsenic and organic matter	}	}
	26.908	26.853 grains.
<i>Gases.</i>		
Free Carbonic Acid	14.936	15.985 c. in.
Nitrogen . . . . .	.003	.003 "
Oxygen	0	.003 "

ROISDORF (Rhenish Prussia). Altitude 1000'.

Table water.

Analysis of 16 oz. Troy = 7680 grs. :—

	Trink- quelle.	Stahl- quelle.
Carbonate of Soda	6.04	1.38 grains.
Carbonate of Lime	2.16	2.18 "
Chloride of Sodium	14.60	3.86 "
Carbonate of Magnesia	3.06	1.03 "
Carbonate of Protoxide of Iron . . . . .	.05	.20 "
Silica . . . . .	.12	.70 "
	29.70	10.53 grains.
Carbonic Acid	19 c. in.	

Imported.

ROMAN SPA (Echzell, Ober-Hessen). An acidulated mineral water, suitable for table use.

Fresenius's Analysis of 16 oz. :—

Chloride of Sodium	11.606
Chloride of Potassium . . . . .	.469
Chloride of Calcium	1.313
Sulphate of Lime . . . . .	.962
Carbonate of Lime	5.663
Carbonate of Magnesia	10.582
Carbonate of Protoxide of Iron . . . . .	.306
Silicic Acid . . . . .	.614
Total Solid Constituents	31.519
Carbonic Acid (free and in solution)	21.636
	53.155

ROSBACH (Germany).

Analysis of 1 gallon = 70,000 grains:—

Chloride of Sodium	83.0 grains.
Carbonate of Lime	25.7 "
Carbonate of Magnesia	12.6 "

Imported and drunk as a table water. 121.3 grains.

ROYAT (Puy-de-Dôme, France). Altitude 1380'.

These are alkaline springs, and are useful in cases of gastro-intestinal dyspepsia, rheumatism, and catarrhal affections of the genito-urinary passages.

Analysis of 1000 grains:—

	Eugénie.	César.	St. Mark.	St. Victor.	
Bicarbonate of Soda	1.349	.392	.8003	.8886	grains.
Bicarbonate of Potash . . . . .	.435	.286	.1701	.8886	"
Bicarbonate of Lime	1.000	.686	.9696	1.0121	"
Bicarbonate of Magnesia . . . . .	.677	.397	.6568	.6464	"
Bicarbonate of Iron . . . . .	.040	.025	.0230	.0560	"
Sulphate of Soda . . . . .	.185	.115	.1463	.1656	"
Phosphate of Soda . . . . .	.018	.014	traces.	traces.	"
Chloride of Sodium	1.728	.766	1.5655	1.6497	"
Chloride of Lithium	—	—	.0350	.0350	"
Silicic Acid . . . . .	.156	.167	—	—	"
Silica	—	—	.0945	.0950	"
	5.588	2.848	4.4551	5.4370	grains.
Carbonic Acid . . . . .	.377	1.229	1.709	1.492	grains.

Imported.

RUBINAT (Pyrenees, Spain). A natural purgative water. The usual dose is from half to one wineglassful, taken in the morning fasting.

Boucharlat's Analysis of 16 oz.:—

Sulphate of Soda	674.8707 grains.
Sulphate of Potash	1.6120 "
Sulphate of Magnesia	22.8540 "
Sulphate of Lime	13.6004 "
Chloride of Sodium	14.4064 "
Silica, Alumina, and Ferric Oxide (trace) . . . . .	.2100 "
Total Solid Constituents	727.5535 "

SAINT BOËS (Mouzieq, Basses-Pyrénées, France). A natural, sulphonaphthalic, arsenical, ioduretted water, unique in chemical composition and therapeutic qualities; it is cold (temperature 54° Fahr.), limpid, strongly sulphuretted, and naphthalic. It bears transport and storage without deterioration. The St. Boës water is a powerful natural specific against the various diseases of the skin, and of the mucous membranes generally, of the bronchia, lungs, and chest. It is invaluable for the treatment of bronchitis, laryngitis, angina, phthisis, both pulmonary and laryngeal, all kinds of catarrh, asthma, chronic diseases of the stomach, dyspepsia, gastritis, gastralgia, imperfect digestion, chronic venereal diseases, tetter, eczema, etc.

SAINT-GALMIER (Loire, France). Altitude 1350'.

Useful in dyspepsia.

<i>Analysis of 1000 grains:—</i>	"Badoit" spring.
Bicarbonate of Soda	560 grains.
Bicarbonate of Potash	020 "
Bicarbonate of Lime	1440 "
Bicarbonate of Magnesia	
Sulphate of Soda	200 "
Sulphate of Lime	
Silicate of Alumina	134 "
Chloride of Magnesium	480 "
	2834 grains.
Free Carbonic Acid	125 volume.

Imported.

SALINS-LES-BAINS (Jura, France). Altitude 1054'.

Season from May 15th to September 30th. The waters are used for scrofulous affections.

<i>Analysis of 16 oz.:—</i>	
Iodide of Sodium	trace
Bromide of Potassium	2145 grains.
Chloride of Potassium	17963 "
Chloride of Magnesium	60908 "
Carbonate of Lime	trace
Carbonate of Magnesia	trace
Sulphate of Lime	99166 "
Sulphate of Potash	47656 "
Chloride of Sodium	1592160 "

SANKT-MORITZ or SAINT-MAURICE (Upper Engadine, Switzerland). Altitude 5464'. Climate rough; environs romantic. Mean temperature of summer months, 51° F.

Tonic and stimulating, in debility, anæmia, neuralgia, scrofula, and in some conditions of lung disease. Used for drinking and for baths. Season, July and August.

The old spring contains in 16 oz. Troy = 7680 grs. :—
Temperature, Fahr. 42°.

Carbonate of Lime	5.5 grains.
Carbonate of Magnesia	1.0 "
Carbonate of Iron . . . . .	.18 "
Carbonate of Manganese . . . . .	.03 "
Carbonate of Soda	1.46 "
Sulphate of Soda	2.0 "
Chloride of Sodium . . . . .	.29 "
Sulphate of Potash . . . . .	.12 "
Silica . . . . .	.29 "
Phosphoric Acid . . . . .	.03 "
Bromine, Iodine, and Fluorine	traces.

10.90 grains.

Carbonic Acid 39.5 c. in.
Imported.

The new spring contains 13½ grains of solids in 16 oz., viz. :—

More Lime and Magnesia than the old spring, 0.25 grain of Iron, and 40½ cubic inches of Carbonic Acid.

SARATOGA (U.S.A.). The water is alterative, contains in a degree iodides and bromides, and is useful in glandular and visceral obstructions, also in diseases of the skin. Dose, is one or two bottles daily.

Analysis of 16 oz. :—

Temperature 52° Fahr.

	Congress.
Chloride of Sodium	6·0066 grains.
Chloride of Potassium	·1207 "
Bromide of Sodium	·1282 "
Iodide of Sodium	·0020 "
Bicarbonate of Lime	1·4938 "
Bicarbonate of Magnesia	1·0822 "
Bicarbonate of Soda	·1120 "
Bicarbonate of Lithia	·0448 "
Bicarbonate of Baryta	·0114 "
Bicarbonate of Strontia	trace
Bicarbonate of Protoxide of Iron	·0037 "
Sulphate of Potash	·0133 "
Phosphate of Soda	·0002 "
Silica	·0126 "
Alumina	trace
Organic Matter	trace

Total Solid Constituents 9·0320 "

Carbonic Acid Gas (free) 52·8 cubic inches.

The "Congress" and the "A" Springs are bottled for export.

SAUERBRUNNEN (Goslar-am-Hartz, Germany). A natural mineral table water, with a most agreeable flavour. It stimulates the appetite and promotes digestion.

Analysis in grains per gallon :—

Chloride of Sodium	·20699
Chloride of Potassium	·25578
Sulphate of Magnesia	·73157
Bicarbonate of Magnesia	·92610
Silica	·62300

Total Solid Constituents 2·74344

SCHINZNACH (Switzerland). Altitude 1060'. Mountainous and picturesque.

Climate mild and salubrious.

There is only one spring; it is the most sulphureous of all the Continental waters, and the most frequented. The visitors are chiefly French. The baths are cooled to 90° F.; they are used for skin diseases, diseases of the bones, and local rheumatism.

Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 96° F.

Sulphate of Soda	9·87 grains.
Sulphate of Potash	·68 "
Sulphate of Lime	1·20 "
Chloride of Potassium	5·48 "
Chloride of Magnesium	1·14 "
Magnesia	·64 "
Carbonate of Magnesia	·03 "
Carbonate of Lime	1·09 "
Oxide of Iron	·008 "
Alumina	·07 "
Silica	·09 "

Gases.

Carbonic Acid	2·38 c. in.
Sulphuretted Hydrogen	1·72 "
Nitrogen	a trace.

SCHLANGENBAD (Nassau). Altitude 933'. Mean annual temperature, 50° F. Locality romantic. Air mild and bracing. Season, June, July, and August. The baths have a sedative and a beautifying influence on the skin, rendering it soft and juvenile; highly useful in nervous irritability arising from debility.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :—

Sulphate of Potash	0.091 grains.
Chloride of Potassium	0.004 "
Chloride of Sodium	1.325 "
Phosphate of Soda	0.004 "
Carbonate of Potash	0.079 "
Carbonate of Lime	0.250 "
Carbonate of Magnesia	0.047 "
Silica	0.258 "

2.558 grains.

Carbonic Acid 0.668 grain.

SCHWALBACH (Nassau). Altitude 909'. Climate bracing. Mean season temperature, 64° F.

Resorted to for quiet, and recruiting dilapidated health. Season, June, July, and August.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :—

	Stahl- brunnen. Temperature, Fahr. 46°-51°	Wein- brunnen. 49°-50°	Paulinen- brunnen. 48°-50°	Rosen- brunnen.
Bicarbonate Protoxide of Iron . . . . .	.643	.443	.65	.91 grain.
Bicarbonate Protoxide of Man- ganese . . . . .	.141	.070	0	0 "
Bicarbonate of Soda . . . . .	.158	1.884	.45	.35 "
Chloride of Sodium . . . . .	.052	.066	.03	.32 "
Sulphate of Soda . . . . .	.061	.048	.02	.8 "
Sulphate of Potash . . . . .	.029	.057	0	0 "
Bicarbonate of Lime	1.700	4.394	2.95	2.95 "
Bicarbonate of Magnesia	1.630	4.467	2.75	.98 "
Silica . . . . .	.246	.357	0	0 "
<i>Gases.</i>	3.660	11.786	6.86	5.57 grains.

Carbonic Acid 50.27 45.6 39.5 .26 c. in.

Sulphuretted Hydrogen003 .003 0 0 "

The first two are for drinking, the last two for bathing. The Stahlbrunnen is employed for general torpidity.

Imported.

SEIDLITZ (Bohemia).

Steinmann's Analysis of 16 oz. Troy = 7680 grs. :—

Sulphate of Magnesia	79.55 grains.
Sulphate of Soda	17.44 "
Carbonate of Lime	5.29 "
Carbonate of Magnesia . . . . .	.20 "
Carbonate of Strontia . . . . .	.009 "
Sulphate of Lime	4.14 "
Sulphate of Potash	4.41 "
Chloride of Magnesium	1.06 "
Carbonate of Protoxide of Iron and Manganese . . . . .	.05 "
Silica . . . . .	.05 "
Fluoride and Bromide of Magnesium	a trace.

112.199 grains.

SELTERS (Nassau). Altitude 800'. Furnishes the well-known *Seltzer-water*.

Kastner's Analysis of 16 oz. Troy = 7680 grs. :—

	Temperature 62° F.
Bicarbonate of Soda	9.7741 grains.
Chloride of Sodium	17.2285 „
Chloride of Potassium . . . . .	.2890 „
Sulphate of Soda . . . . .	.2615 „
Phosphate of Lime . . . . .	.0004 „
Phosphate of Alumina . . . . .	.0002 „
Phosphate of Soda . . . . .	.2615 „
Fluoride of Calcium . . . . .	.0016 „
Bicarbonate of Lime	2.6678 „
Bicarbonate of Magnesia	2.5586 „
Bicarbonate of Iron . . . . .	.1088 „
Bicarbonate of Manganese . . . . .	.0032 „
Bromide of Sodium . . . . .	.0002 „
Silica . . . . .	.2500 „
	<hr/>
	33.4054 grains.

Gases.

Carbonic Acid	30.0100 c. in.
Nitrogen . . . . .	.0285 „
Oxygen . . . . .	.0046 „
	<hr/>
	30.0431 c. in.

Imported.

SODEN (Nassau). Altitude 437'. Locality charming; air mild; temperature steady.

There are nineteen other springs not in use. In Germany these springs have a great reputation for chest diseases, are employed in atonic gout, scrofula, and diseases peculiar to females.

Analysis of 16 oz. Troy = 7680 grs. :—

	Milch- brunnen. 74°	Warm- brunnen. 70°	Wilhelms- brunnen. 57°	Sool- brunnen. 68°
Chloride of Sodium	17.68	26.13	104.10	114.40 grains.
Chloride of Potassium . . . . .	.16	1.29	2.53	3.52 „
Sulphate of Lime . . . . .	.19	.25	.98	.76 „
Carbonate of Lime	2.73	4.47	8.38	8.63 „
Carbonate of Magnesia	1.37	2.63	1.28	.29 „
Carbonate of Iron . . . . .	.16	.30	.30	.60 „
Alumina . . . . .	.01	0	.05	.88 „
Silica . . . . .	.16	.23	.30	.50 „
	<hr/>			
	23.46	35.30	117.92	129.58 grains.
Carbonic Acid	17.0	35.9	48.9	14.0 c. in.

SPA (Belgium). Altitude 1630'. Sheltered. Air salubrious and bracing, but subject to sudden changes of temperature.

There are seven springs in all.

These chalybeates are highly beneficial in anæmia, debility, and depression of system. Season, August and September.

Struve's Analysis of 16 oz. Troy = 7680 grs. of Pouhon :—

	Temperature, 52° Fahr.
Carbonate of Protoxide of Iron . . . . .	.375 grains.
Carbonate of Protoxide of Manganese . . . . .	.052 „
Carbonate of Soda . . . . .	.738 „
Carbonate of Lime . . . . .	.986 „
Carbonate of Magnesia	1.123 „
Sulphate of Potash . . . . .	.079 „

Sulphate of Soda . . . . .	.038 grains.
Chloride of Sodium . . . . .	.050 "
Phosphate of Lime . . . . .	.013 "
Phosphate of Alumina . . . . .	.009 "
Silica . . . . .	.499 "

Carbonic Acid Gas 3.962 grains.
Imported. 21.6 c. in.

TARASP (Switzerland). Lower Engadine. Altitude 4265'. Scenery mountainous and cultivated.

Useful in abnormal obesity, oppressed functions of the glandular and vascular system, gout, rheumatism, and skin diseases, the mountain air contributing largely to invigorate the system. Season, June to September, when the weather is genial and constant. Mean temperature of July, 51° F.

Dr. Planta's Analysis of 16 oz. Troy = 7680 grs. :-

	Grosse-quelle, Temperature 37° F.	Kleine-quelle.
Sulphate of Soda	16.547 grains.	16.417 grains.
Carbonate of Soda	27.229 "	28.535 "
Chloride of Sodium	29.401 "	29.381 "
Carbonate of Magnesia	5.076 "	4.977 "
Carbonate of Protoxide of Iron . . . . .	.152 "	.140 "
Carbonate of Lime	12.432 "	12.402 "
*Iodide of Sodium	1.536 "	—
Sulphate of Potash	2.998 "	3.337 "
Silica . . . . .	.247 "	.092 "
Alumina . . . . .	.002 "	—
Phosphoric Acid . . . . .	.002 "	—
Carbonic Acid	34.887 "	33.271 "

Imported.

TAUNUS (Frankfort). Altitude 390'.

Analysis of 10,000 parts :-

Chloride of Sodium	25.72
" Potassium	2.70
Carbonate of Lime	13.70
" Magnesia	1.76
" Soda . . . . .	.20
Sulphate of Lime . . . . .	.58
Silica	traces.
Alumina	traces.
Phosphate of Lime	traces.

54.66

Carbonic Acid compressed 28.94
Carbonic Acid by estimate in solution 17.35

46.29

Imported and drunk as a table water.

TCHITLI (Turkey). Bicarbonate of Soda Spring.

Rises at 55° F., sp. g. 1005.

Contents of a litre = 35 fluid oz.

* Dr. Killias has corrected Planta. He says the quantity of Iodide of Sodium is only 0.0015 grain.

Bicarbonate of Soda	4.554 grammes.
" " Potash . . . . .	.148 "
" " Magnesia . . . . .	.365 "
" " Lime . . . . .	.367 "
Sulphate of Soda . . . . .	.132 "
Phosphate of Soda . . . . .	.061 "
Chloride of Sodium . . . . .	.066 "
Protoxide of Iron . . . . .	.005 "
Iodide of Sodium	a trace.
Silex . . . . .	.057 "
Free Carbonic Acid . . . . .	.475 "

Imported.

6.230 grammes.

TOEPLITZ or TEPLITZ (Bohemia). Altitude 648'. Sheltered. Climate mild and salubrious. Mean annual temperature, 50° F.

There are several springs, ranging from 78° to 120° F., nine bathing establishments, and mud-baths also. The baths are best suited to nervous patients, very efficacious in chronic rheumatism, gout, paralysis, and neuralgia.

Wolf's Analysis of 16 oz. Troy = 7680 grs. :—

	Haupt-quelle. Temperature, 120° F.
Sulphate of Potash	0.098 grains.
Sulphate of Soda . . . . .	.290 "
Carbonate of Soda	2.635 "
Phosphate of Soda . . . . .	.014 "
Fluoride of Silicium . . . . .	.351 "
Chloride of Sodium . . . . .	.433 "
Carbonate of Lime . . . . .	.330 "
Carbonate of Strontia . . . . .	.027 "
Carbonate of Magnesia . . . . .	.088 "
Carbonate of Protoxide of Iron . . . . .	.019 "
Carbonate of Protoxide of Manganese . . . . .	.021 "
Phosphate of Alumina . . . . .	.020 "
Silica . . . . .	.443 "
Crenic Acid . . . . .	.034 "

VALS (France). Altitude 2475'.

4.854 grains.

Beneficial in lithiasis, indigestion, syphilitic and skin diseases, and scrofula.

M. Henri's Analysis of 1 litre (35 fluid oz.) :—

	Saint- Jean. Temperature 66° F.	Pré- cieuse. 66° F.	Dé- sirée. 68° F.	Rigo- lette. 68° F.	Made- leine. 66° F.
Bicarbonate of Calcium	0.3100	0.630	0.571	0.259	0.520
Bicarbonate of Magnesia	0.1200	0.750	0.900		
Bicarbonate of Soda	1.4800	5.940	6.040	5.800	7.280
Bicarbonate of Potash	0.0400	0.230	0.263	0.265	0.255
Bicarbonate of Protoxide of Iron with trace of Manganese	0.0060	0.010	0.010	0.024	0.029
Chloride of Sodium and Potassium	0.0600	1.080	1.100	1.200	1.016
Sulphate of Soda	0.0540	0.185	0.200	0.220	0.235
Sulphate of Calcium	0.0700				
Alumina	0.0110	0.060	0.058	0.060	0.097
Bicarbonate of Lithia					
Arsenate of Soda		traces.	traces.	traces.	traces.
Alkaline Ioduret		traces.	traces.	traces.	traces.
Organic Matter					

Grammes 2.1510 8.885 9.142 7.828 9.104

= Grains 33 136 141 120 140

Carbonic Acid Gas 0.4250 2.218 2.145 .095 2.050

Saint-Jean, sedative; Désirée, Précieuse, laxative; Rigolette, Madeleine, renovating; also Dominique, tonic.

Imported.

VERNET (Eastern Pyrenees). The principal sources of the ancient Thermae used by the Romans.

There are three springs, temperature 48° F., 91° F., and 137° F. Here Ibrahim Pasha resided. By means of pipes fed by the thermal water the apartments are kept at a comfortable warmth (54° to 59° F.) the whole of the winter (most desirable for phthisical patients), so that the waters can be taken at all seasons. Mean temperature of the atmosphere in October, 61° F.; in November, 51° F.; showing a mild and equable climate.

VICHY (Central France). Altitude 787'. Locality charming; climate very mild, hot in summer.

Useful in kidney diseases and diabetes, also in gout and hepatic derangement.

Both for drinking and bathing. Season, May to October.

Bouquet's Analysis of a litre (35 fluid oz.):—

	Grande Grille. 106° F.	Hôpital. 86° F.	Célestins. 57·6° F.	Hauterive. 59° F.
Carbonic Acid	0·908	1·067	1·299	2·183
Bicarbonate of Soda	4·883	5·029	4·101	4·687
Bicarbonate of Potash	0·352	0·440	0·231	0·189
Bicarbonate of Magnesia	0·303	0·200	0·554	0·501
Bicarbonate of Strontia	0·003	0·005	0·005	0·003
Bicarbonate of Lime	0·434	0·570	0·669	0·432
Bicarbonate of Protoxide of Iron	0·004	0·004	0·004	0·017
Bicarbonate of Protoxide of Manganese	trace.	trace.	trace.	trace.
Sulphate of Soda	0·291	0·921	0·314	0·291
Phosphate of Soda	0·130	0·046	trace.	0·046
Arseniate of Soda	0·002	0·002	0·003	0·002
Borate of Soda	trace.	trace.	trace.	trace.
Chloride of Sodium	0·534	0·518	0·550	0·534
Silica	0·070	0·050	0·065	0·071
Organic Matter, Bituminous	trace.	trace.	trace.	trace.
	Grammes 7·914	8·222	7·865	8·946
Imported.	Grains = 122	126	121	138

VICTORIA OFENER (*see* BUDA-PESTH).

WEILBACH (Nassau). Altitude 420'. Situated on a fertile declivity. Climate mild.

The water is generally warmed before being drunk.

Good in chest diseases, in gout, rheumatism, and herpetic affections, and in lead and mercury poisoning.

Fresenius's Analysis of 16 oz. Troy = 7680 grs.:—

	Sulphur Spring, Temperature 57° F.	New Soda-Lithia, Temperature 54·5° F.
Bicarbonate of Soda	3·123	7·3748 grains.
Bicarbonate of Lithia	·006	·0452 "
Bicarbonate of Baryta	·009	Carbonate of Iron ·0193 "
Bicarbonate of Strontia	·001	Carbonate of Manganese ·0039 "
Chloride of Sodium	2·083	·9·6677 "
Chloride of Potassium	·214	Sulphate of Soda 1·7073 "
Sulphate of Potash	·298	·4233 "
Phosphate of Alumina	·001	Bromide of Sodium ·0056 "
Phosphate of Lime	·002	Iodide of Sodium ·0010 "
Carbonate of Lime	2·909	·7501 "
Carbonate of Magnesia	2·758	·5563 "
Silica	·111	·0943 "
Organic Matter	·037	Carbonate of Ammonia ·0871 "
<i>Gases.</i>	11·566	20·6581 ..
Carbonic Acid	3·126 c. in.	Carbonic Acid 5·9553 c. in.
Sulphuretted Hydrogen	·169 "	Sulph. Hydrogen ·0026 ..
Imported.		

WIESBADEN (Nassau). Altitude 346'. Open to the south, with charming environs. Mean annual temperature 51° F. Season, May to September.

There are twenty-three springs; the Kochbrunnen is the principal.

Useful in chronic rheumatism and gout. The baths are allowed to cool before using them.

Fresenius's Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 160° F.

Chloride of Sodium	52.50	grains.
Chloride of Potassium	1.12	"
Chloride of Lithium . . . . .	.001	"
Chloride of Ammonium . . . . .	.130	"
Chloride of Calcium	3.620	"
Chloride of Magnesium	1.570	"
Bromide of Magnesium . . . . .	.030	"
Sulphate of Lime . . . . .	.690	"
Silica . . . . .	.460	"
Carbonate of Lime	3.210	"
Carbonate of Magnesia . . . . .	.080	"
Carbonate of Protoxide of Iron . . . . .	.040	"
Carbonate of Protoxide of Manganese . . . . .	.004	"
Phosphate of Lime . . . . .	.003	"
Arsenate of Lime . . . . .	.001	"
Silicate of Alumina . . . . .	.004	"
	63.463	"
<i>Gases.</i>		
Carbonic Acid	16.72	c. in.
Nitrogen . . . . .	.10	"

WILDBAD (Württemberg). Altitude 1300'. Scenery wild and romantic. Season, June to September, when the weather is hot; the other months very cold.

There are about fifty warm springs.

These baths are used in chronic rheumatism and gout, and in paraplegic paralysis of the lower extremities. Plethoric habits require care in using the baths.

Analysis of 16 oz. Troy = 7680 grs. :—

Temperature, 96° F.

Chloride of Sodium	1.82	grains.
Carbonate of Soda . . . . .	.53	"
Sulphate of Soda . . . . .	.40	"
Sulphate of Potash . . . . .	.20	"
Carbonate of Lime . . . . .	.34	"
Carbonate of Magnesia . . . . .	.70	"
Carbonate of Protoxide of Iron and Manganese . . . . .	.29	"
Silica . . . . .	.39	"
	3.58	grains.

Gases.

Carbonic Acid		
Nitrogen		
Oxygen		

[The above have been condensed from the works of Dr. Sutro, Dr. Althaus, Dr. Glover, and the various pamphlets issued at the sources of the several Spas.]

The following are sold in bottles :—

- ADELHEIDSQUELLE (Heilbrunn, Germany). Contains a large proportion of Salts of Bromine and Iodine; acts powerfully on the glandular, lymphatic, and cutaneous systems. *Vide* analysis.
- ÆSCULAP (Hungary). A recently imported water, which Professor Tichborne has compared with Hunyadi Janos, as being equally purgative, and more antacid, its action is gentle, and at the same time prompt and efficacious.
- AIX-LA-CHAPELLE (Rhenish Prussia). For cutaneous diseases, &c.
- * ALET (France). Chalybeate. Useful in cases of debility.
 - * ALLEVARD (Isère, France). Sulphureous. Useful in chest diseases and skin affections.
- APOLLINARIS (Neuenahr). Acidulous, gaseous, and combines the properties of Seltzer and Ems (Krähnen). Good for sickness, dyspepsia, and bad appetite. When impregnated with Carbonic Acid is drunk at meals.
- * BARÉGES (France, *Hautes-Pyrénées*). Sulphureous; effective in skin diseases, scrofula, diseased bone, and ulcers. *Vide* analysis.
- BETHESDA (Wisconsin, U.S.A.). A water used successfully in the treatment of diseases of the kidneys and inflammation of the bladder.
- * BIRMENSORFF (Switzerland). Alterative bitter saline, consisting chiefly of Sulphates of Lime, Magnesia, and Soda.
- BONNES (France, *Basses-Pyrénées*). Sulphureous; is highly extolled for incipient consumption, scrofula, rheumatism, and as a purifier of the blood. *Vide* analysis.
- BOURBOULE, LA (France, *Puy-de-Dôme*). Contains arsenic and iron. For impoverished blood, gout, &c.
- BUSSANG (France, *Vosges*). Saline chalybeate; strengthens the digestive organs, acting mildly on the bowels and kidneys.
- CARLSBAD (Sprudel, 165° F. Mühlbrunnen, 127° F., and Schlossbrunnen). Alkaline and gaseous; Sprudel is the favourite; drunk for bilious affections, gall stones, jaundice, gout, and gravel; are powerfully purgative. *Vide* analysis.
- CARLSBAD-SALT. In bottles.
- * CAUTERETS (France, *Hautes-Pyrénées*). Sulphureous; more exciting than Baréges and Bonnes; useful in skin diseases, rheumatism, and scrofula.
 - * CHALLES (Savoy). Sulphureous; milder in action than Baréges.
- CONDAL (Pyrenees, Spain). Non-bitter aperient. For chronic indigestion, affections of the liver, and spleen.
- CONTREXÉVILLE (France, *Vosges*). Alkaline, chalybeate; promotes circulation of the blood, good in chlorosis, gastralgia, etc.
- EMS (Kessel and Krähnen, Nassau). Saline, gaseous, preferred to Carlsbad in nervous irritability, good in pulmonary as well as scrofulous complaints, gout, etc. *Vide* analysis. Also EMS-SALT in bottles.
- ENGHIEN (Paris, Montmorency). A valuable sulphureous water, useful in glandular affections, and as a general tonic.

FACHINGEN (Nassau). Acidulous, gaseous; a favourite beverage, acting on the kidneys and bladder, and counteracting the tendency to lithic acid. *Vide* analysis.

FRANZ JOSEF (Buda-Pesth, Hungary). Palatable aperient water, rich^{ly} in Salts of Magnesium, and Sodium.

FRIEDRICHSHALL, Bitter Water (Saxe-Meiningen). Alterative, aperient; acting on the liver and pancreas; similar to Pullna. *Vide* analysis. It is very largely consumed in England, being a most valuable alterative and aperient; it is made warm and drunk in doses of half a tumblerful in the morning twice a week. The importations are frequent, as it is bottled at the Spring throughout the year except in frosty weather.

GUBER (Srebrenica, Bosnia). Contains arsenic and iron. For anemia and chlorosis, in diseases of women and children.

HOMBURG (Central Germany). More active than Kissingen Rakoczi, and better suited to a torpid state of bowels. *Vide* analysis. Also Homburg Salt.

HUNGARIAN BITTER WATER (Royal), like Hunyadi Janos.

HUNYADI JANOS. See BUDA-PESTH. Bitter aperient.

KISSINGEN (Maxbrunnen, Bavaria). Saline, gaseous; less exciting and more aperient than Carlsbad. (Rakoczi, Pandur.) Saline, gaseous; aperient, alterative, deobstruent, with a specific action on the uterine system of females. *Vide* analysis.

KISSINGEN, Bitter Water, is similar to that of Friedrichshall.

KREUZNACH (Elizabeth, Prussia). Saline; contains Iodine; alterative, tonic and renovating, useful in lymphatic and torpid habits. *Vide* analysis.
KREUZNACH-SALT in bottles.

KRONDORF (Austria). Sparkling and refreshing; may be drunk *ad lib.* Aids digestion, and is diuretic.

KRONENQUELLE (Obersalzbrunn, Silesia). Sodio-lithiated saline, slightly ferruginous, with agreeable flavour. For gouty diathesis and nephritic affections.

LEVICO (Austrian Tyrol). Contains Arsenic and Iron.
For anemia, chlorosis, &c.

LUHATSCHOWITZ (Moravia, Austria). Contains Bromide, Iodide, Chloride, and Carbonate of Sodium.

MARIENBAD (Kreuzbrunnen, Bohemia). A gaseous bitter saline, similar in properties to Carlsbad, but milder. *Vide* analysis.

NEUENAUHR (on the Rhine, Apollinaris). Gaseous saline; exhilarating, diuretic, slightly acting on the liver and stomach. *Vide* analysis.

OBERBRUNNEN (Salzbrunn, Silesia). A lithiated saline, similar to "Kronenquelle," but stronger. For gouty diathesis and nephritic affections.

OFEN (Rakoczi), Kissingen.

ORITZA (Corsica). Chalybeate, with a trace of Manganese, and highly sparkling; useful in gasalgia, sluggish liver, and spleen, chlorosis, amenorrhœa, and leucorrhœa.

POUGUES (France). Saline, slightly chalybeate, contains 34 grs. in 20 oz., chiefly Bicarbonates of Lime and Magnesia, with Carbonic Acid; drunk for gravel and catarrh of the bladder.

PULLNA (Bohemia). A bitter saline; mild and effective purge, acting without griping. *Vide* analysis.

PYRMONT (Westphalia). A valuable chalybeate in dyspepsia, debility from exhausting diseases, and constitutional weakness. *Vide* analysis.

* ROMAN SPA (Echzell, Ober Hessen). Acidulated, gaseous, sparkling; drunk as a table water.

ROYAT (France, *Puy-de-Dôme*). Alkaline spring, good in cases of gastrointestinal dyspepsia, rheumatism, &c.

RUBINAT (Pyrenees, Spain). A saline purgative. Similar to "Condal."

SAINT-MORITZ (Switzerland). Tonic, and stimulating in debility.

SCHWALBACH (Weinbrunnen and Stahlbrunnen, Nassau). Chalybeate; pleasant to drink, tonic, alterative, and restorative; the Weinbrunnen preferred.

* SEIDLITZ, Bitter water (Bohemia). Purgative.

SOULTZMATT (France). Acidulated, gaseous; much used in France as a beverage.

SPA, Pouchon; Prince de Condé. Gaseous, chalybeate waters; restorative in cases of debility consequent upon disease, bodily or mental exertion, for both sexes; either of them may be used.

TARASP (Switzerland). Drunk for abnormal obesity, &c., &c.

TAUNUS. Acidulated, gaseous. Much used as a table water.

VALS (France). Strongly resembling those of Vichy, but less lowering; the principal are, Madeleine, Précieuse, and Rigolette. *Vide* analysis.

VICHY, Source de l'Etat (France). Saint-Yorre, alkaline; Parc, 71° F., alkaline; Des Dames, 61° F., chalybeate, most gaseous; Célestins, 39° F., for gravel and gout; Hauterive, 59° F., Hôpital, 87° F., for indigestion; Grande Grille, 107° F., for liver, dyspepsia, and intermittent fever, loss of appetite, congestion of liver and spleen; Lardy, chalybeate, for anæmia. *Vide* analysis.
VICHY-SALT in bottles.

* WEILBACH (Nassau). A weak sulphureous water, and largely impregnated with Carbonic Acid Gas; used in chest diseases.

WILDUNGEN (Waldeck). Alkaline, diuretic, antilithic, tonic; restorative, useful in leucorrhœa, spermatorrhœa, and, mixed with milk, for chronic bronchial affections.

WOODHALL and PURTON British waters
and MISSISQUOI from the United States } are also sold in bottles.

Those marked with an asterisk are not so frequently in demand, and should be ordered in advance.