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Platform of the Swiss Academy of Sciences**Chemical Landmark 2009 – First Chemical Factory in Switzerland**

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The first designation of a ‘Chemical Landmark’ in Switzerland has been established in Winterthur, where Johann Heinrich Ziegler (1738–1818), Johann Sebastian Clais (1742–1809) and Johann Jakob Sulzer (1738–1797) built the first chemical factory in Switzerland in the years 1777 to 1781. This complex of buildings (called *Laboratorium* at that time) was located at the *untere Neuwiese* some hundred meters outside of the existing town. Unfortunately, the last buildings were demolished in 1960.

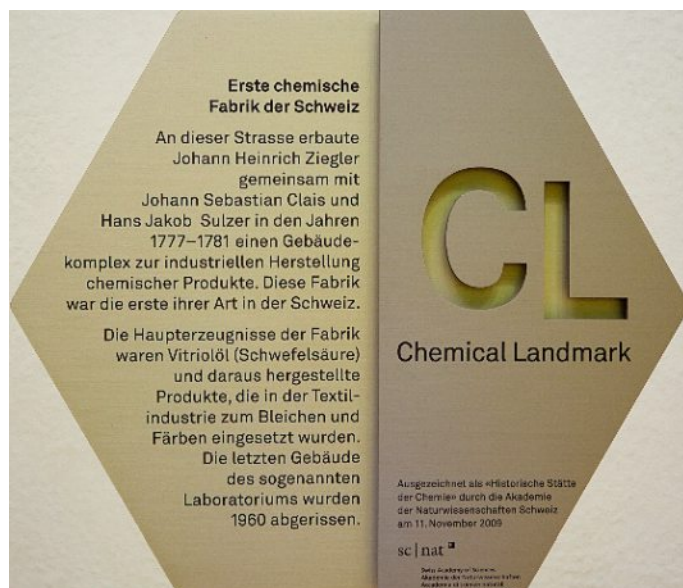
The main products of the factory were vitriolic acid (sulfuric acid) and products made of it, which were used as bleaching and coloring agents in the local and nationwide textile industry, which flourished during the 18th and 19th centuries. The factory also produced other products such as hydrochloric acid and soda as the chemical catalog of 1781 shows.

The designation as a ‘Chemical Landmark’ took place on November 11th, 2009 directly on the *Laboratoriumsstrasse* in Winterthur. More than 50 people attended the ceremony; among them local politicians, chemists and historians from all over Switzerland, but also residents and other interested people from the regional community.

Felix Escher, Vice-president of the SCNAT, welcomed the attendees and gave a short introduction to the SCNAT. The laudatio, written by Karl Gademann, member of the board of the «Platform Chemistry», emphasized the historical importance of the *Laboratorium* at the beginning of the industrial revolution and its role as a starting point of a prospering chemical industry, which plays nowadays a major role in the economic system of Switzerland. Afterwards, Rudolf Gamper, a local historian from



Hans-Jürgen Hansen, Barbara Winter, Rudolf Gamper, Felix Escher (from the left to the right, Photo: M. Lio)



Commemorative plaque (Photo: M. Lio)



Main building of the «Laboratorium» in 1960 (Source: Winterthurer Bibliotheken, Sondersammlungen)

Winterthur, gave an overview of history of the *Laboratorium* and the biography of its founders. Hans-Jürgen Hansen, Emeritus of the Organic Chemistry Institute of the University of Zurich, illustrated in his speech the rapidly developing chemistry of the 18th century, which is very well seen in the discovery of a major number of elements, among them oxygen, nitrogen, hydrogen and chlorine. The practical chemical knowledge was mainly exploited in the mining industry, salines, metallurgy, gunpowder manufacture and handicrafts, such as tanning, dyeing and bleaching industries. Also in the late 18th century, Lavoisier, Berthollet and Fourcroy jointly published their work ‘*Méthode de nomenclature chimique*’, which can be seen as the starting point of modern chemical nomenclature.

Winterthur im Jahr 1781

Nachbemelte Produkte aus allhieriger Fabrik von mineralischen Säuren und Salzen sind meistens vorräthig, theils aber auf Bestellung hin, acht und gerecht zu haben.

Gewicht der Centner zu hundert Pfund, das Pfund zu achtzehn Unzen.

- 1 Vitriolöl, in Qualität wie das beste Englische.
Braunkücker. 35^o.
Weisses, rectificirtes. 40^o.
Weisses, höchst reines & über den Helm getriebenes, zum Arzneigebrauch &c. 41^o. g. d. l.
- 2 Vitriolgeift, über den Helm getrieben. 44^o.
- 3 Schwefelgeift, flüchtiger, oder Spiritus Sulphuris per Campanam. 30^o.
- 4 Salpetergeift, Rauchender, oder Spiritus Nitri fumans. 47^o.
- 5 Scheidwasser, ordinari, für Hutmacher, Gurtler &c. 36^o.
- Dito für Färber, das zu vollkommener Auflösung des Zians zur Scharlachfarbe vorzüglich eingerichtet: 33^o.
- Dito feines, zur Auflösung des Silbers, und für Kupferfächer. 40^o.
- Dito depurirtes, so das Silber ohne etliche Trübheit oder Bodenatz auflöst. 41^o.
- Dito für Gold, Goldscheidwasser, oder Aqua Regia. 39^o.
- 6 Salzgeift, stark rauchender. 36^o. Schwächerer. 24^o.
- 7 Vitriol, Blauer, oder sogenannter Cypriacher, in schönen Krystallen. 38^o.
Dito, vollkommen gleiche Güte, aber in kleineren Krystallen. 33^o.
- 8 Vitriol, Salzburger, in Qualität, wie er sich zum Schwarzfärben der Wolle am besten schickt. In Ausleihen um Farbe kann er auf Bestellung hin nach Belieben oder nach Muster gemacht werden. 29^o.
- 9 Vitriol, grüner, oder Kupferwasser, ganz rein und in saubern Krystallen. 41^o.
- 10 Vitriol, weisser, oder Zinkvitriol. 24^o.
- 11 Stahlfalz, zum Arzneigebrauch besonders heretiet, oder Sal Maris. 15^o.
- 12 Eisenfalz, oder Eisen mit Salzsäure verbunden; giebt unter gehöriger Behandlung eine schöne, solide Kulfarbe, auf auch ein vorzüglich gutes Schwarz, auf Seide, Baumwolle und Leinen. 41^o. 13^o. 15^o. 20^o.
- 13 Alluan, in hellen Krystallen, frey von Eisen- oder Vitriol-Gehalt, sehr tauglich zu delicatesen Farben auf alle Stoffe. 13^o.
- 14 Grüne Mahlerfarben, von verschiedener Qualität, schön und solid. 18^o.
- 15 Sal mirabile Glauberi, ächtes, ganz reines Glaubersches Wunderfalz schön krystallförmig. 30^o.
- Dito, in Pulver zerfallen, wovon zwey Theile ungefähr gleiche Wirkung haben mit fünf Theilen von krystallförmig. 41^o.
- 16 Arcanum duplicatum. 12^o.
- 17 Tartarus Vitriolatus. 24^o.
- 18 Sal Polychrestum, ächtes Polychrestfalz. 45^o.
- 19 Spiritus Vini Alcalifatus, Weingeist mit Alkali deslegmirt. 11^o.
Dito, Höchst rectificirt, oder Alcohol Vini. 11^o.
- 20 Liquor mineralis anodinus Hoffmanni. 31^o.
- 21 Aether Vitriolicus. 9^o.

In dem Jahr 1781 im Winterthurer Laboratorium gegeben von G. F. Vögelz J. Regier.

Product list of 1781 (Source: Zentralbibliothek Zürich, Ms. Car. XV 154a.4, Beilage)

After the commemorative plaque was unveiled, Ernst Wohlwend, Mayor of the City of Winterthur, thanked the SCNAT in the name of the city for this honor. In his speech, he emphasized the importance of the first chemical factory for the industrial history of the city and the innovative character of former and present enterprises in Winterthur.



Revelation of the commemorative plaque by Ernst Wohlwend, Mayor of the City of Winterthur, Barbara Winter and Felix Escher (Photo: M. Lio)



Commemorative plaque at its final place at the Laboratoriums-Strasse (Photo: M. Lio)

More information about the 2009 'Chemical Landmark' designation may be found at www.chemistry.scnat.ch/Chemical_Landmark_2009.