

K – Ka – Kali - Kalium

Clemens M. Brandstetter



Rumänisch Romanian special cancel in honor of Humphrey Davy (2008)



A diseased kidney often results in altered potassium levels (Austria 1990)

Potassium occurs on earth only as a compound in minerals: Sylvin (potassium chloride), sylvinite, carnallite, kainite, schoenite, polyhalt, orthoclase (potash feldspar), muscovite (potash mica). The largest occurrences are in Saskatchewan about 1,000 meters underground. Israel and Jordan use the water of the Red Sea as a source of potassium. In Wittelsheim (Alsace)



Special postmark Staßfurt (2002)

On Nov. 19, 1807, Humphrey Davy reported to the Royal Society in London that he had succeeded in preparing two different metals by electrolysis of caustic alkalis - one he called potassium and the other sodium; known to us as potassium and sodium. Both are important trace elements in our body, they are a duo that orchestrates our body.

We are interested in potassium because it regulates osmotic pressure, electrolyte homeostasis and acid-base balance. Potassium is essential for the transmission of nerve impulses to induce muscle contractions and is important for heart function and manages blood pressure. A disturbance of the potassium balance, e.g. by reduced potassium intake or increased excretion by the kidneys, therefore leads to a variety of symptoms such as muscle weakness, general weakness, sensory disturbances, paralysis, central nervous disturbances, ECG changes, cardiac arrhythmias, and in the worst case cardiac arrest. Hyperkalemia usually results from decreased excretion of potassium by the kidney due to disease or drugs, or when it is released from a large number of body cells as a result of major injuries such as burns. Causes of hypokalemia may include side effects of drugs, but also prolonged and severe diarrhea.



Potassium feldspar: Switzerland 1960

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Postcard with return address of the fertilizer factory A. Schormann. in Schötmar. Perfin with perforation AS in 5 Pf

there is a potassium bath. Water containing potassium helps against eczema and neurodermatitis.

In agriculture, potassium is named potash. It, nitrogen and phosphorus are the most important nutrients for plants. Potash regulates the water balance and gas exchange. In Germany, the cradle of potash salt is in the Royal Prussian salt mine in Staßfurt; rock salt, which was heavily contaminated with potash, was first dumped; in 1857, the valuable potash salt was recognized. This marked the beginning of the high-flying development of artificial fertilizers. Fertilizer use was topped by the



Haber-Bosch process, patented in 1910; in the recent past, there has been discussion about using less fertilizer because agriculture is suspected of spreading too much fertilizer. Organic farmers and hobby gardeners make potassium fertilizer from nettle manure; some also use wood ash from their own stoves.



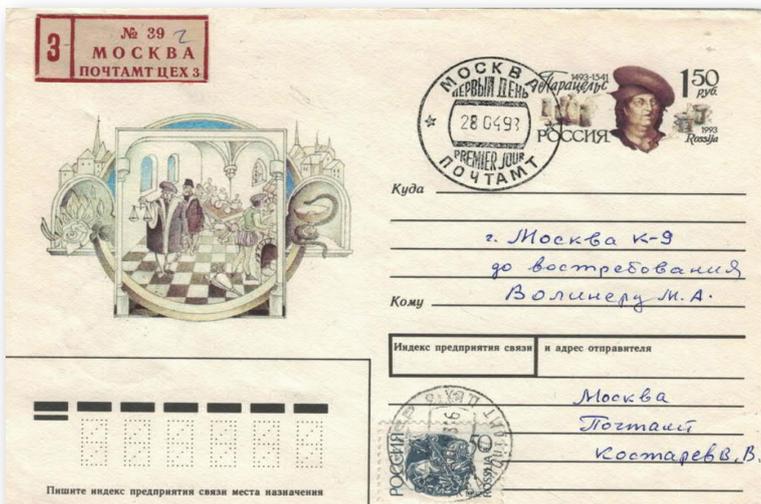
Closure stamp with advertising for Schuessler salts

Potassium is also contained in salt tablets, which today are controversial: Schüssler salts. This involves No. 4 Kalium chloratum (mucous membranes), No. 5 Kalium phosphoricum (nerves, psyche) and No. 6 Kalium sulfuricum (purification). Similar to globules in homeopathy, one relies on potencies in terms of dilution D6 (1:1 million) or D12 (1:1 trillion). Which of the salt tablets is now to help, is determined by means of "biochemical face analysis". On the effectiveness DocCheck.com writes "Real studies on Schüssler salts are completely missing, so a positive assessment of their effectiveness is impossible. The only known human trials were conducted in the concentration camps of Dachau and Auschwitz. The Nazis originally had a great interest in [establishing] biochemistry as "folk medicine"".

Potassium also plays a role in homeopathy: thus globules "containing" Kalium phosphoricum are also administered. Their field of application is described on Globoli.de as follows: "For sick people who are mentally and physically exhausted: A nervous breakdown caused by prolonged physical or mental stress. Weight loss, weakness, headache and backache. It can also be used in pregnant women to relieve emotional swings, fatigue and resulting back pain. Children have difficulty reading and learning, nocturnal enuresis (nocturnal enuresis) in nervous, debilitated children."



Stamp depicting the founder of homeopathy S. Hahnemann. Depicted are also, among others, the famous globules (Monaco 1990).



First day cover of a Russian postal stationery. Cancelled 28.4.1993 in Moscow. The stamp depicts Theophrastus Bombast von Hohenheim alias Paracelsus with apothecary vials and mortars. In addition - probably to have enough postage for this registered cover - one of Russia's first stamps after the collapse of the Soviet Union from 1992 was affixed at the bottom (50 kopecks, Saint George).

It is not up to the author of these lines to judge about Schüssler salts or the use of globules, because ultimately it is said that faith can move mountains. Scientifically it is called placebo effect. Not only the National Socialists were looking for a formula to reduce health care costs, but also many of today's health ministers need to reduce health care costs, because there are always too many sick people. Biochemistry could be an approach for "medicine from nothing" - inexpensive, always available, cost-neutral.

I want to conclude this excursion into chemistry with the original assignment [Daniela: "write something about murders with potassium"]. Paracelsus said that all substances are poison unless you dose

them accordingly. This also applies to potassium chloride, which is actually non-toxic. In the first case

described here, the assassination failed due to lack of knowledge about potassium chloride, in the second case "too much" was known, and the third case is about the "legal" use of potassium chloride to kill.

In the first case, it concerns a Berlin horsekeeper. Her boyfriend takes out life insurance policies for a considerable amount in his favor in case his girlfriend, this very same horsekeeper, dies. The murderers hired by him need three attempts. In 2012 her boyfriend's mother tries to stab her, it fails, the potential murderer states in court that she had a blackout and gets free. A second assassination attempt fails because, through ignorance, potassium chloride is not injected but administered orally with champagne. The third attempt on the horsekeeper's life also succeeds only at the second attempt: at the first attempt, the hashers had to refrain from their attempt because the victim showed up for the faked appointment with her boyfriend. However, she came alone to the second appointment and the hired killer stabbed her to death. Those involved in the latest murder attempts received long prison sentences, some for life. The "fees" for the hired killers amounted to between €5,000 and €50,000.

The second case is more located in a hospital setting. Every now and then there are headlines about doctors or nurses being charged with involuntary manslaughter by inducing hypercaemia due to mix-ups of infusion solutions. This is tragic, but some people have taken advantage of the fact that forensic



Sylvin = potassium chloride - Dissolved, it can cause death if injected. Byelorussia 2000

medicine has difficulty detecting poisoning with potassium chloride. The natural level rises rapidly after death due to cell decay and thus transfer of intracellular potassium to all other compartments, thus "overwriting" potassium chloride poisoning. But it is not only confusion that occurs in hospitals. In many



Everyday things during a hospital stay - like putting on an infusion or an intravenous injection - can lead to death intentionally or unintentionally - e.g. by potassium chloride. El Salvador 1975, special postmark Belgium 1969

cases, the so-called "angels of death" use their knowledge of the mode of action and poor detectability of potassium chloride poisoning to carry out their "good" deeds, or, as in the following case, to look like a hero during a resuscitation. In this case, a nurse worked in hospitals in Oldenburg and Delmenhorst from 1999 to mid-2005 and committed numerous murders of patients while on duty, using amongst others potassium chloride. The totality of the solved cases, committed by this angel of death, represents the largest series of murders in German criminal history. In total, the public prosecutor's offices initiated preliminary proceedings in 332 cases on suspicion of murder, which led to a conviction in 80 cases. In addition, there were numerous convictions for dangerous bodily harm. The investigations against the nurse lasted until 2019. At the moment, proceedings are still underway against colleagues and superiors for aiding and abetting manslaughter or attempted manslaughter by omission, as the accumulation of deaths during the duty hours of the said nurse was apparently known.



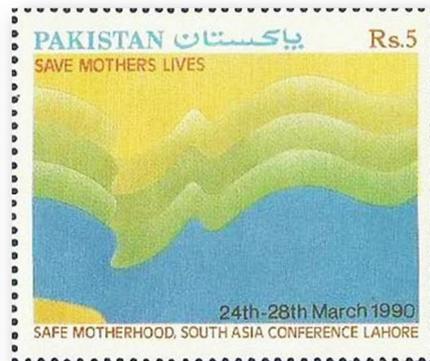
The public prosecutors' offices in various cities had a lot to do in the case of the Angel of Death. Whether Stralsund also had work because of this is beyond my knowledge. EMA 2001

Potassium chloride is also used in the euthanasia of animals, execution by lethal injection, and to prevent live births in late-term abortions. It is also used for cardioplegic solutions (blood cardioplegia according to Cala-fiore) to induce cardiac arrest during operations with heart-lung machines. In the case of its use in abortions, there was a sensational trial in Germany in 2010 that was not concluded until 2019.



Veterinarians also resort to potassium chloride when euthanizing animals, after prior sedation and anesthesia. EM 2002

In this last case, a doctor and a female doctor are accused of manslaughter. They allegedly killed a child during the birth of twins in 2010. The first child - after labor had already begun - is delivered by cesarean section, and the second, who was diagnosed with severe brain damage during pregnancy [in which case abortion would be permissible even after the 12th week of pregnancy], is killed with an injection of potassium chloride. The doctors confessed and argued that it was



Despite all the precautions taken during pregnancy, there are still high-risk pregnancies. If it turns out that the child would not be viable and possibly the life of the mother is endangered by the pregnancy or a viable twin in the womb is endangered, the law gives within very narrow limits the possibility to perform a late termination of pregnancy or to kill the non-viable fetus, so that the viable twin has the chance to enter life unharmed. Both are done by injecting a potassium chloride solution into the fetus' heart. This is called fetocide. Iceland 2019, Netherlands 2020, Pakistan 1990, Poland 1996

fetocide [killing a fetus in the womb]. The court is of the opinion that after the uterus is opened, at that moment the fetus becomes a human being. This becoming a human being also takes place after the onset of the opening contractions. The doctors affirm and object that it is not an abortion, but a fetocide, because the fetus was still in the womb of the mother. Résumé of the two doctors: "We had no doubt that it was the right thing to do. In the foreground was not the legal, but the welfare of the healthy child." The judges ultimately ruled in 2019 on manslaughter and sentenced the doctors to suspended sentences. Now the question of law and morality arises - and this question I want to pass on to the gentle reader for an answer.

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Occupational typhoid deaths of German physicians in the 19th century

PD Dr. Manfred Jähne

Postal honors on stamps or by special postmarks were given by the German Federal Post Office or by the former GDR to doctors and scientists usually on round birth anniversaries as well as for honors, e.g. with the Nobel Prize. However, there are also a few doctors who earned merits for the fatherland during epidemics and epidemic missions, but found death through their profession. The 4 physicians I have listed here have already been honored for their achievements, including Johann Christian Reil on the 200th anniversary of his death by our unforgotten former chairman Dr. Fritz Baumgart in PM, issue 171 (2013) 18-20, who paid philatelic tribute to Reil's scientific achievements in Halle and Berlin.

The Halle physician and pioneer of Romantic medicine in Germany **Johann Christian Reil** (1759-1813) is mentioned in the encyclopedia as an anatomist, surgeon, brain researcher (insula reilii of the cerebral cortex), gynecologist and ophthalmologist. However, he is also considered the founder



On the 150th anniversary of his death

Johann Christian Reil

On the 200th anniversary of his death



of modern psychiatry. Goethe held Reil in high esteem and was also his patient in Halle in 1805. Through his ordinarate at the Charité in Berlin from 1811, he was also responsible for the Prussian military hospitals. Reil unfortunately became infected with typhus while inspecting in a Leipzig military hospital after the Battle of the Nations in October 1813 and died four weeks later on Nov. 22, 1813. A machine stamp from 1963 shows the tribute to the 150th anniversary of his death by the GDR. Baumgart initiated with the AG Medicine and Pharmacy the special stamp (stamp individual) for the 200th anniversary of his death, on which in the text Reil was also called a philosopher.



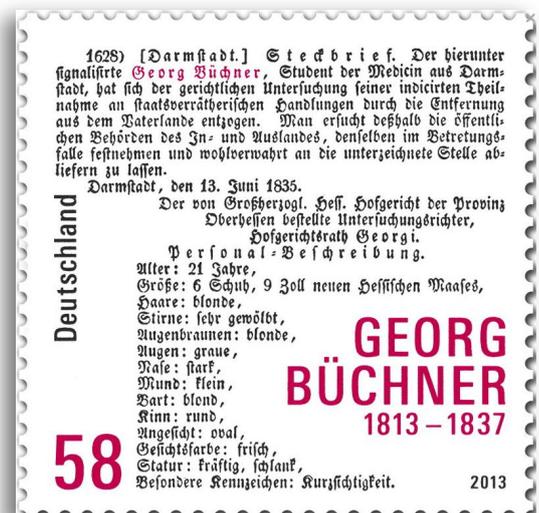
Georg Büchner: 1963

sertation "Treatise on the Nervous System of the Barb". In Zurich he became a private lecturer in 1836. Due to the work on his preparations he fell seriously ill with typhoid fever on February 2 and died of it on February 19, 1837. Büchner was honored by 2 stamp issues: by the German Post of the GDR in 1963 for the 150th birthday with a portrait and a scene from his drama "Woyzek" on a stamp of 20 Pfg. and by the Post of the

Despite his short life, **Georg Büchner** (1813-1837) is considered one of the most important literary figures of the "Vormärz". He became known more as a writer, natural scientist and revolutionary than as a doctor, but must be mentioned here among the typhoid deaths. Born in

Goddelau, Grand Duchy of Hesse, he studied medicine in Strasbourg and wrote his dis-

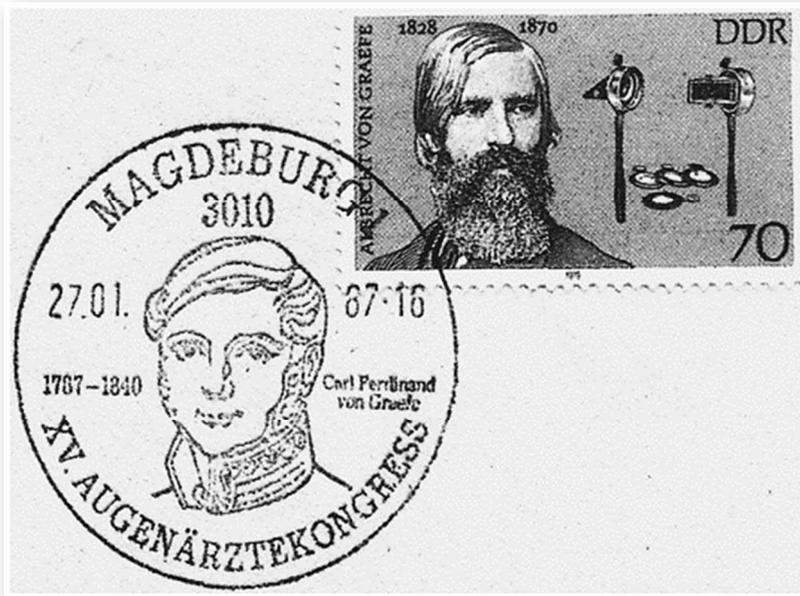
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Georg Büchner: 2013

FRG for his 200th birthday in 2013, but with the imprint of a wanted poster as a literary rebel in 1835!

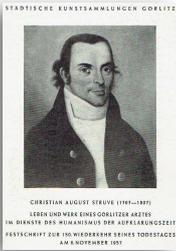
Carl Ferdinand von Graefe (1787-1840) and Johann Christian Reil certainly knew each other well during their work at the Charité in Berlin. Von Graefe more as an ophthalmologist and surgeon, Reil as an internist. Carl Ferdinand von Graefe's father was in the service of a Polish count in Warsaw, but came from Gräfenhain near Königsbrück in Upper Lusatia in Saxony. What a duplicity: in the village of Gräfenhain was born none other than Georg Bartisch (1535-1606), the author of the first



- Cancel: Carl Ferdinand von Graefe 1987
- George V of Hanover (1859)

textbook on ophthalmology in German, "Augendienst" (1583). After studying medicine in Halle and Leipzig, C. F. von Graefe was first a surgeon in Halle from 1807, but as early as 1810 he was appointed professor of surgery and ophthalmology at the newly founded Charité in Berlin. From 1820, however, he worked at the "Klinisch chirurgisch-agenärztliches Institut der Universität" in Ziegelstraße. C. F. von Graefe was instrumental in turning surgery from a partially robust technique into a scientifically founded "art" in the first third of the 19th century. He was the first to perform palatal suturing, created a method of rhinoplasty, and ophthalmologically he has the priority of treating purulent conjunctivitis with the aqueous solution of hellstone. He was an extremely prudent eye surgeon and was praised by his contemporaries for his skills. He also perfected the upper corneal incision introduced by Friedrich Jaeger (1784-1871) for cataract extraction. However, the so-called Graefe incision (quarter-arch incision) for linear extraction of the eye lens was introduced by his son Albrecht von Graefe (1828-1870), the reformer of ophthalmology in the 2nd half of the 19th century. For his high commitment in military hospitals during the wars of liberation 1813-1815, Prof. von Graefe was ennobled by the Russian Tsar Nicholas I in 1826 on the suggestion of Polish officers recovered under his treatment. On a trip to Hanover, where he was to operate on the cataract of the later King George V, who had suffered from sympathetic ophthalmia since his youth, he contracted a typhoid infection on the way and died of typhoid fever on July 4, 1840. The author is the initiator of the special postmark for the XV Ophthalmologists' Congress of the GDR in Magdeburg in 1987, struck off on the stamp for his son, Dr. Albrecht von Graefe, on the stamp of the GDR for his 150th birthday.

The life of the Görlitz physician **Christian August Struve** (1767-1807) was in the service of humanism in the Age of Enlightenment. After studying medicine in Leipzig and receiving his doctorate in 1790, Struve took over his father's pharmacy in Görlitz. This council pharmacy is still a stately historical building on the Untermarkt. Dr. Edward Jenner, who had become famous in England for his "vaccination" against smallpox with the less dangerous cowpox, found an energetic vaccinator in Struve in Saxon Upper Lusatia and Lower Silesia. He vaccinated children of poor parents free of charge. From him, came 75 publications. In them, he was mainly concerned with general health education and health



education of the population. Struve died after a typhoid infection, which he contracted during the French period while caring for the sick and wounded from Silesia as a stage doctor in 1807. He would have belonged chronologically at the beginning of this publication, but there is no postal tribute to him: an inquiry at the Görlitz stamp collectors' association revealed that there is neither a stamp, special postmark nor machine postmark for Dr. Struve (oil painting). Therefore we have dedicated the AFS on the dispatch folder of this PM to him.

Literatur beim Verfasser dr.m.jaehne@t-online.de

Rudolf Weigl and the Lemberg Spotty Fever Research Station in the General Government

Daniela M. Vogt Weisenhorn



Special postmark for the opening of the Lviv Research Institute on stamps issued in 1940 by the General Government for the occupied Polish territories (see at the end of the article).

The Institute for Spotted Fever and Virus Research was founded in Kraków immediately after the beginning of World War II following the German occupation of Poland in October 1939 and had two "outposts": in Bad Rabka south of Kraków (today Rabka-Zdrój) and in Lviv (today Lwiw). The latter was founded after the German invasion of the parts of eastern Poland previously occupied by the Soviet Union in 1942 and, like the institutes in Krakow and Bad Rabka, was under the command of the Army High Command, because spotty fever research in Germany was and remained war research (for the history of spotty fever research, see the

article by F. Baumgardt PM 196 p. 21/22).

The Lemberg Research Station was probably founded mainly to produce a spotted fever vaccine in large quantities for the German soldiers based on the Weigl method. The research site was headed by the Polish biologist Rudolf Weigl. He agreed to take over this position after 25 Lviv professors - all his colleagues - were shot on June 30, 1940.



Polen: Sonderstempel 1977



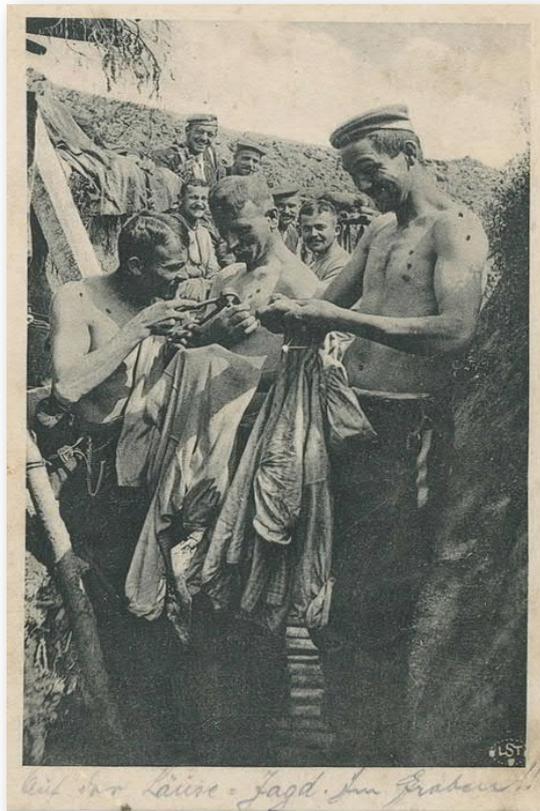
Poland 2011

Although he worked as a vaccine producer for Germany, however, he could not be persuaded to attend the official opening of the Behring-Bayer civilian vaccine production facility by Professor Gildenmeister, a director of the German Society for Microbiology. A similar invitation from Professor Hass, a German director of the institute, was also declined. Weigl said it was impossible for him to shake hands with the murderer of his university colleagues shot by the field group. In his reply to Governor Frank, Hass explained Weigl's absence by saying that he did not deserve to be present at the inauguration.

Also, in 1943, his student Dr. Henry Mosing reported a meeting Weigl had with General Kaufmann, the

Second Commandant of the SS in Lviv. He tried to encourage the professor to confess to being German and to join the Reich German List. Kaufmann suggested that Weigl could take the post of director of a department of the Berlin University, and promised to promote Weigl as a Nobel Prize candidate in Stockholm on behalf of the German Nazi state. He was in fact a candidate for the Nobel Prize in Medicine four times (1932, 1936, 1942, 1946). At the end of the conversation, Kaufmann reminded Weigl of the SS murders of professors of medicine and other lecturers at the University of Lviv. This kind of threat apparently did not deter Weigl, for he refused all the general's offers. Weigl was nevertheless left alone, probably because of his war-related work: the vaccine production. According to today's knowledge, he also saved several thousand people from deportation via this production:

The production of the vaccine was very complex. Among other things, infected lice had to be fed with human blood for this purpose. The "feeding" was done twice a day for 1/2 to 1 hour. For this purpose, a lice cage (a simple gauze cloth) was placed on the arm of test subjects and the lice were thus able to feed on the blood of the "donor" (who was immune to spotty fever). After seven to eight days, just



The causative agent of spotty fever is transmitted by lice, and therefore became a "war-relevant" epidemic, as soldiers in their positions were often infested by lice and thus spotty fever due to poor hygienic conditions. Field postcard from World War I with the caption: "On the lice hunt in the trench!"

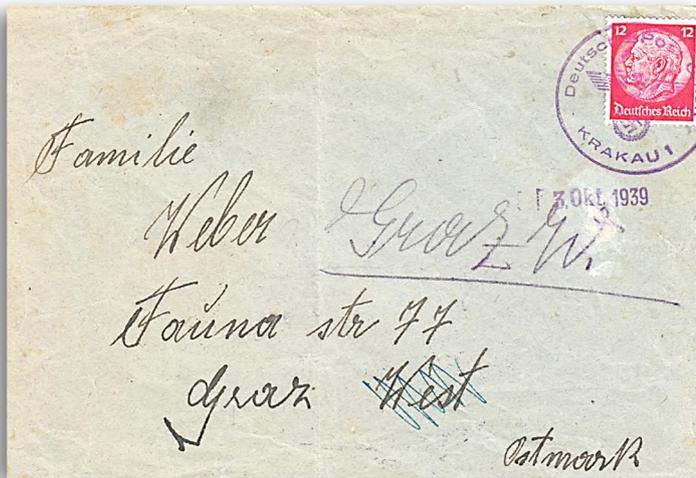
before the "natural" death brought about by the pathogens, the lice were killed in phenol solution and then their intestines were operated out under large magnifying glasses. The pathogens, which were also killed, were centrifuged and then triturated with phenol saline. 100 intestines were needed for one inoculation portion. The finished vaccine,

melted into glass ampoules, was injected subcutaneously in three portions at five-day intervals. The vaccine protection lasted about one year.

Rudolf Weigl succeeded in having this work classified as important for the war effort. Thus, his "blood donors" became "war-important" employees who received special identification papers. This protected them from the worst reprisals and, in most cases, from deportation. They also received higher food rations and the possibility to move relatively freely. He also had the vaccine smuggled into the ghettos of Warsaw and Lemberg and gave shelter to scientists of Jewish origin.

After the end of the war, Weigl continued his research at the universities of Krakow and Poznan and became emeritus professor in 1951. He died in Zakopane in 1957. Ignored by the communist rulers and even accused of collaboration with the Germans, his achievements were officially recognized only after 1989. In 2003, he was posthumously awarded the "Righteous Among the Nations" medal in Yad Vashem.

Postal and Telecommunications Services in the General Government for the Occupied Polish Territories

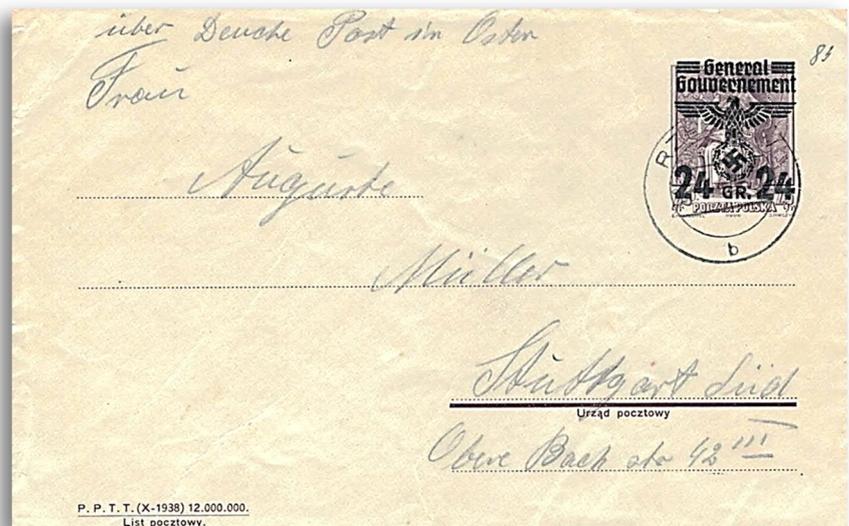


Letter dated 13.10.1939 from Krakow to Graz. Hindenburg stamp cancelled "Deutsche Post Osten". After the campaign in Poland, there was initially only field mail. In addition to messenger and courier mail, a post office was then established in the large cities and transport routes were sought. At first, there were only Reich German stamps that soldiers or postal workers had brought with them. From the beginning of December, the first stamps from the Generalgouvernement were available. Mixed franking with DR stamps were allowed until the end of December 1939, tolerated until 31.3.40.

The General Government for the Occupied Polish Territories comprised the territories of the former Second Polish Republic that were militarily occupied by the German Reich in

1939-1945 and not directly incorporated into the Reich territory by annexation. The establishment of the Generalgouvernement was based on a decree issued by Hitler on October 12, 1939, and replaced the administration under the military commander-in-chief that had been in effect until then. The German occupation of the Generalgouvernement combined a policy of exploitation and extermination.

Postal and telecommunications services in the General Government for the occupied Polish territories were handled by "Deutsche Post Osten". Deutsche Post Osten issued its own postage stamps starting in 1939. The stamp issues of the Generalgouvernement were issued from December 1, 1939. Initially, a series of German Reich stamps from the Hindenburg medallion series with Deutsche Post Osten overprint, then, from March 1940, overprint variants on originally Polish stamps, and finally, from August 5, 1940, completely independent Generalgouvernement stamps. The last three issues, planned for the end of 1944 or 1945, were not issued. A total of 78 definitive stamps and 41 special stamps were issued. The postage rates corresponded to those of the German Reich at the conversion rate 1 Pfennig = 2 Groschen. From October 1943, the Generalgouvernement was integrated into the Reich-German system of postal codes. The postal code 7 a applied to the entire area.



Postal stationery cover from the Generalgouvernement with 24 Groschen overprint.

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