

Materials

Infrared Spectra of Inorganic Compounds

Yoshiaki SEKIKAWA, *Masaru SHIMADA *

*Central Customs Laboratory, Ministry of Finance 531, Iwase, Maysudo-shi Chiba-Ken

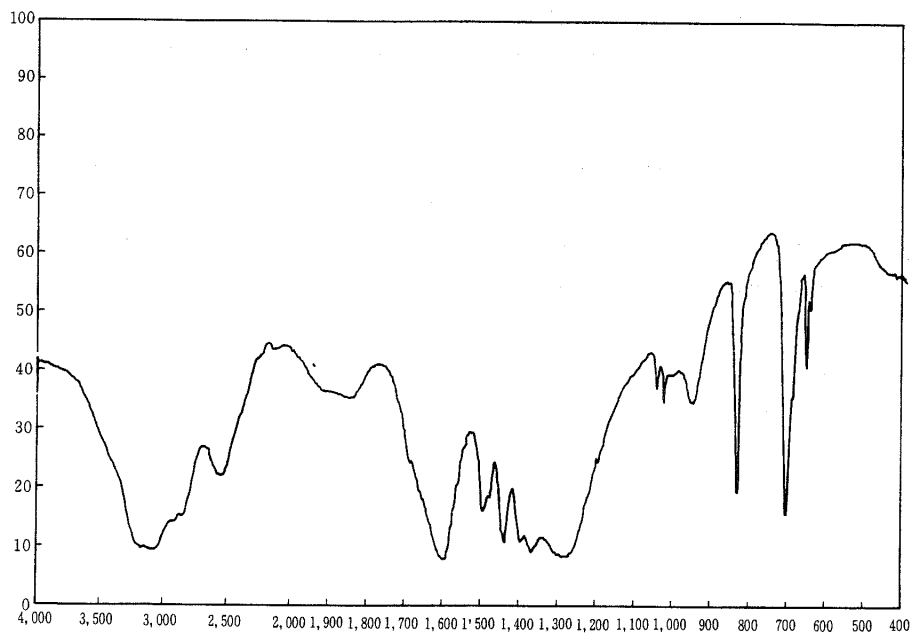
This is a collection, to suit an analyst's convenience for qualitative work, of infrared spectra of inorganic compounds which are very common in every laboratory. Most of the chemicals for infrared measurements were products of Wako pure Chemical Industries Ltd and Junsei Chemicals Ltd, with a few which were imported. All spectra were obtained by Hitachi Grating Infrared Spectrophotometer Model EPI G2 by the preparation of KBr discs.

1 $(\text{NH}_4)_2\text{CO}_3$

ammonium carbonate

Ammoniumcarbonat

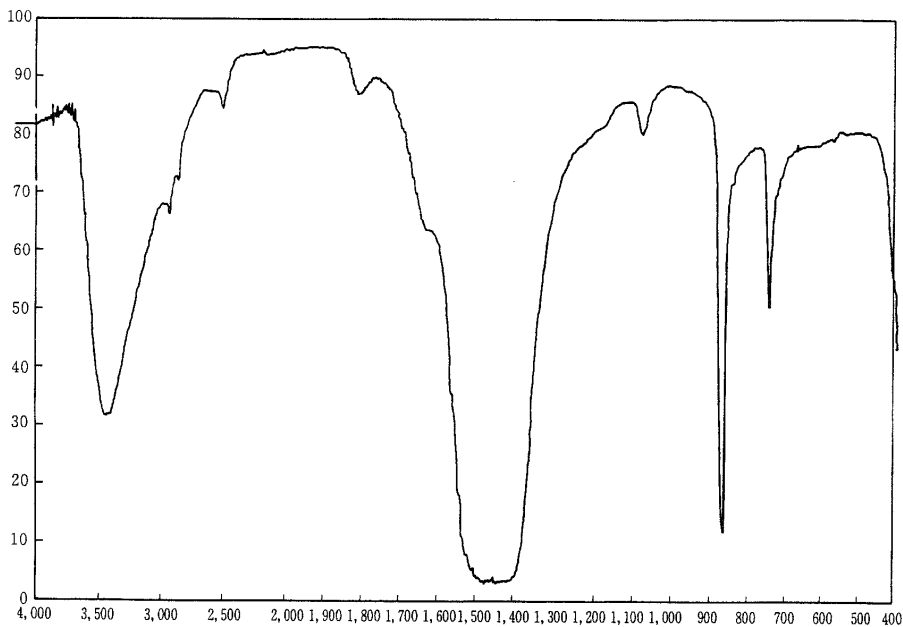
carbonate d'ammonium

**2 CoCO_3**

cobaltous carbonate

Kobaltcarbonat

carbonate de cobalteux

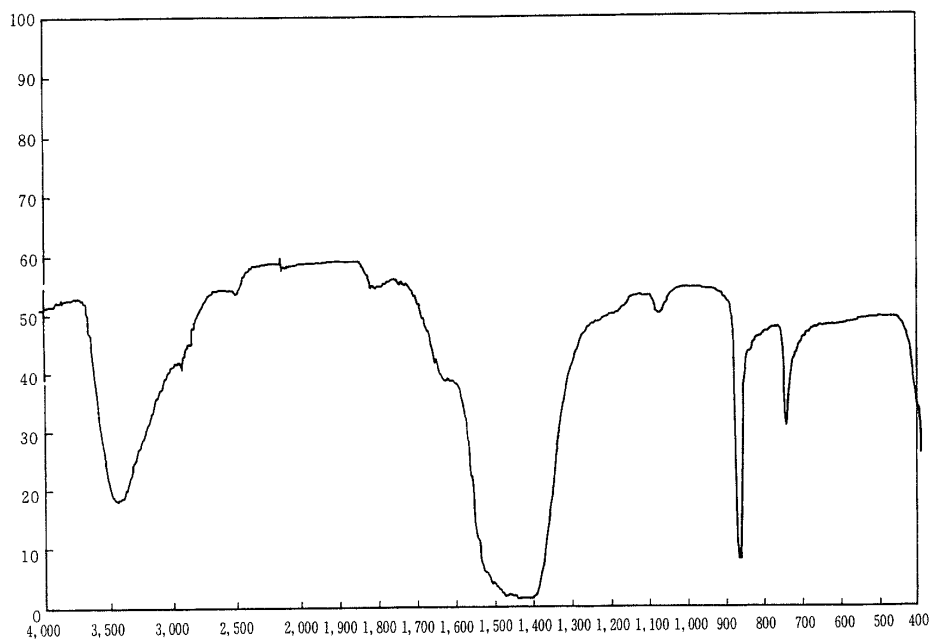


3 CaCO_3

calcium carbonate

Kalziumcarbonat

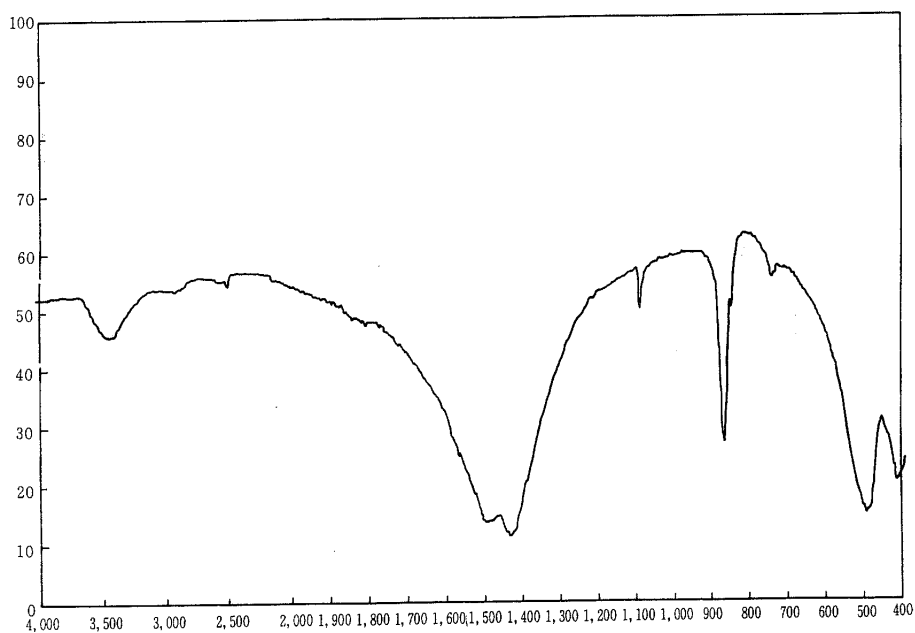
carbonate de calcium

**4 Li_2CO_3**

lithium carbonate

Lithiumcarbonat

carbonate de lithium

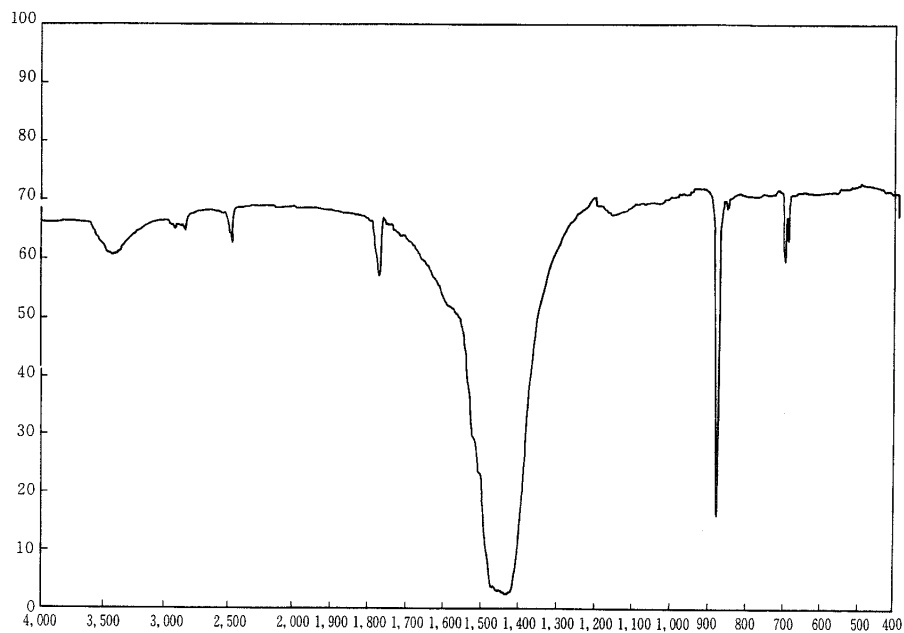


5 (Na_2CO_3 , ca 99%)

soda ash

kalzinierte Soda

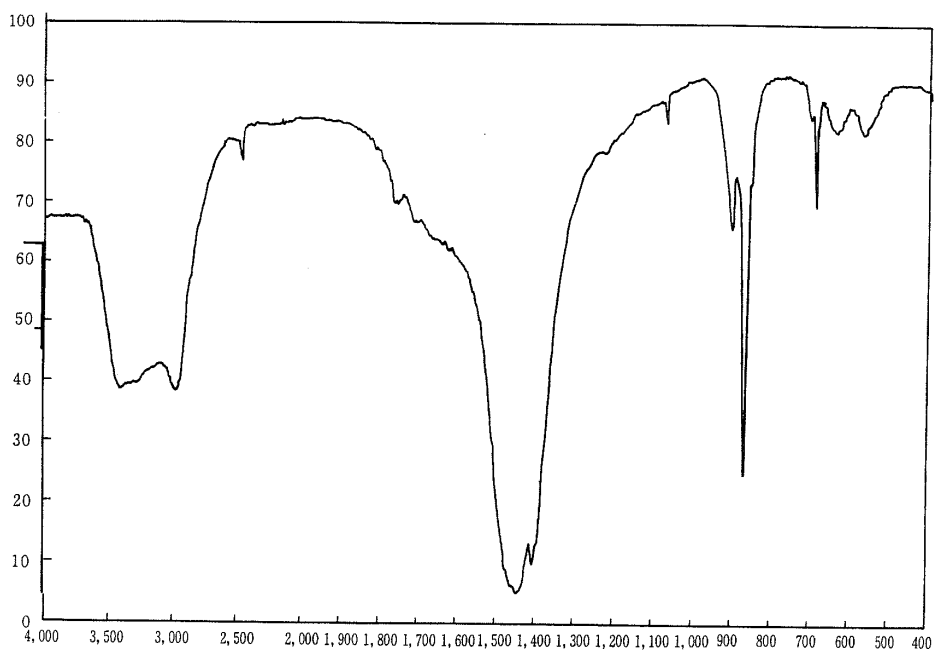
soude calcinée

**6 $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$**

sodium carbonate

Sodiumcarbonat

carbonate neutre de sodium

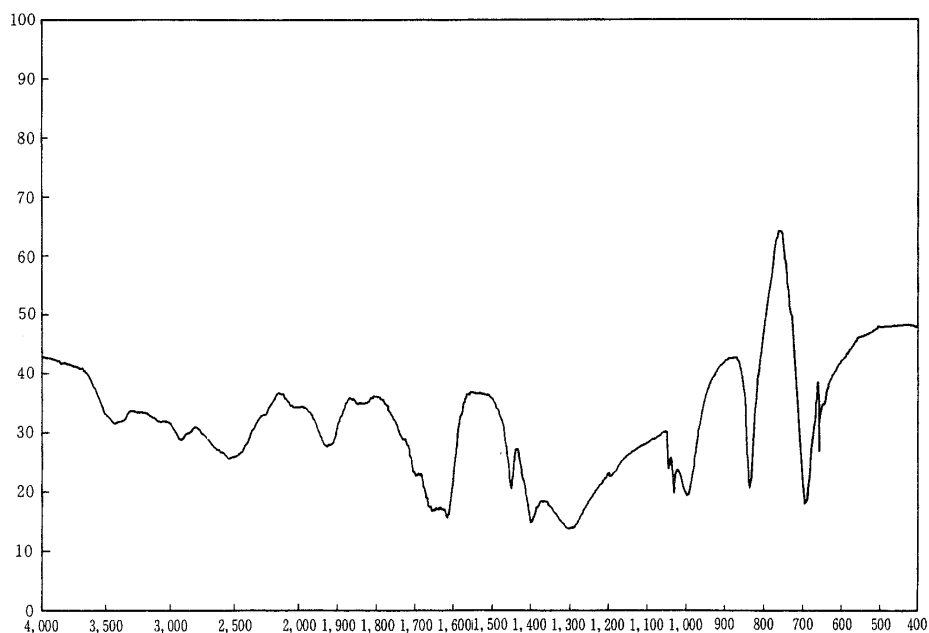


7 NaHCO_3

sodium bicarbonate

Natriumcarbonate

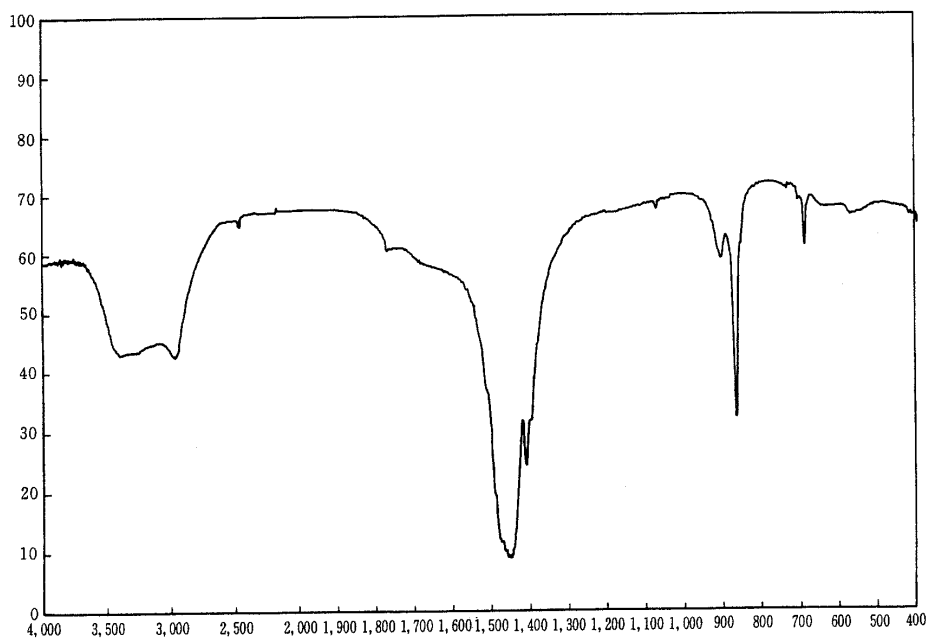
carbonate hydrogène de sodium

**8 $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$**

sodium carbonate

Natriumcarbonat

carbonate de sodium

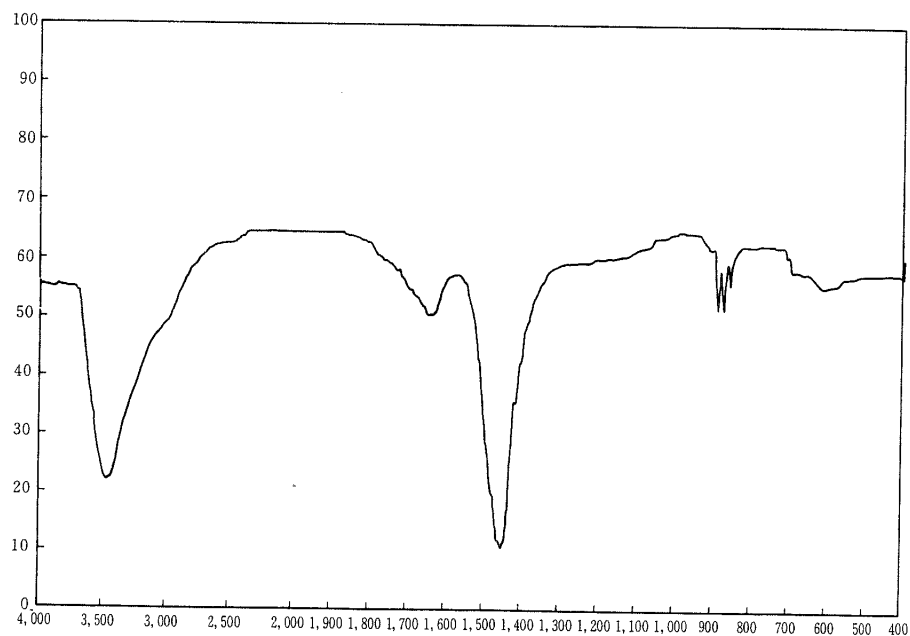


9 K_2CO_3

potassium carbonate

Kaliumcarbonat

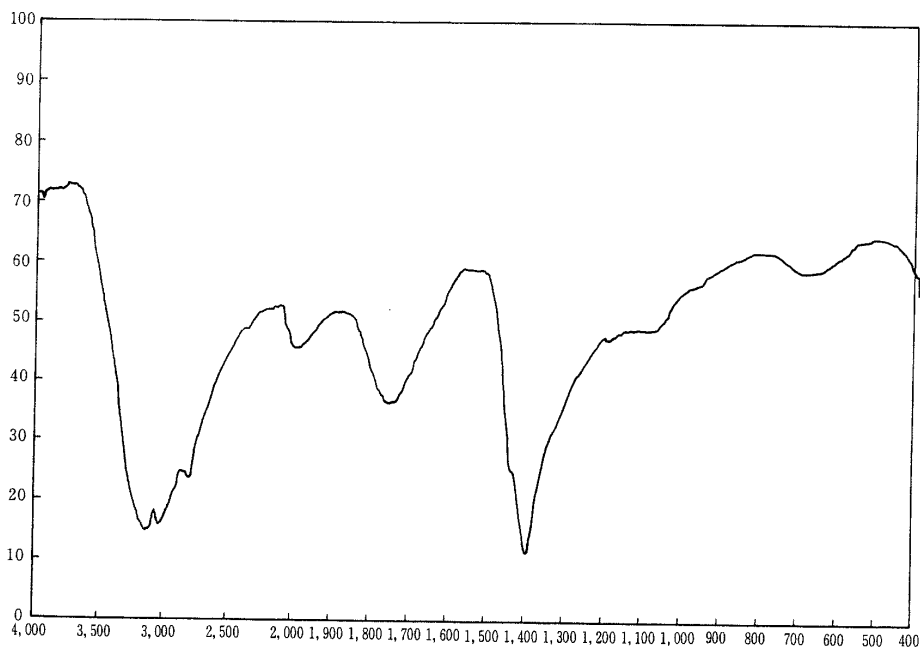
carbonate de potassium

**10 NH_4Cl**

ammonium chloride

Ammoniumchlorid

chlorure d'ammonium

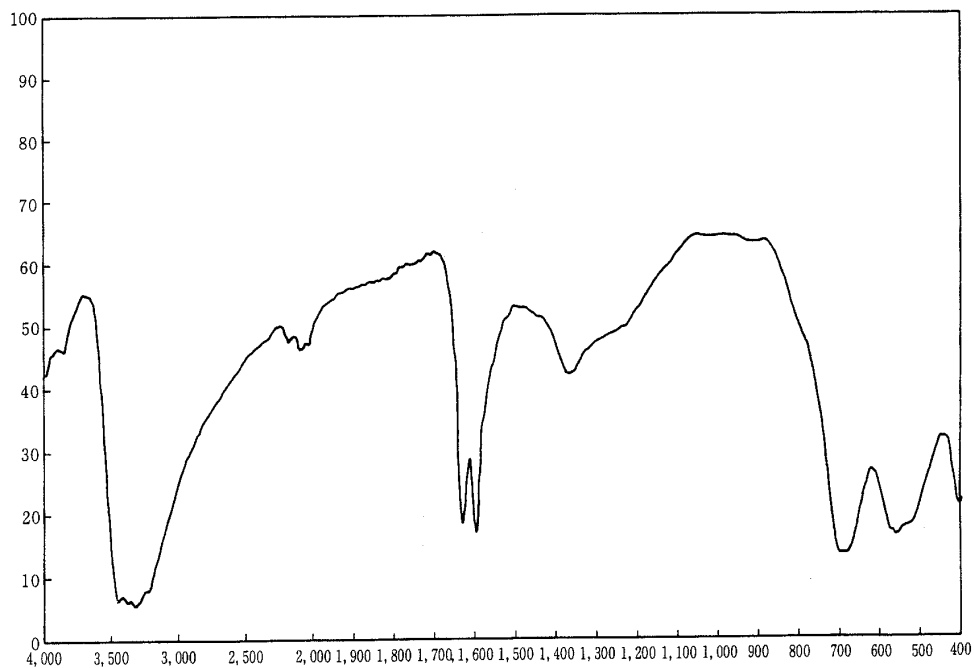


11 BaCl₂·2H₂O

barium chloride

Bariumchlorid

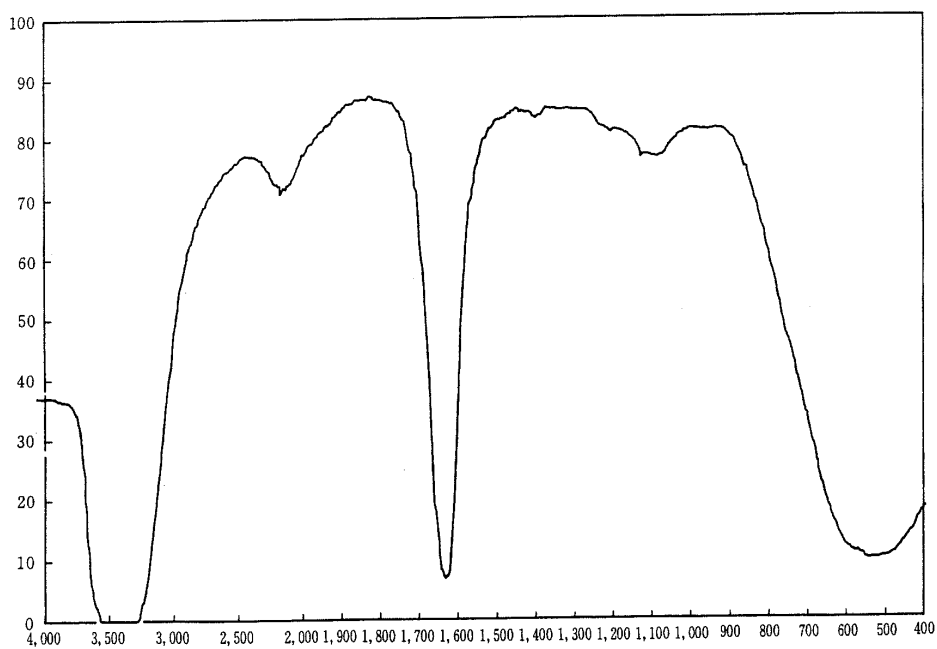
chlorure de baryum

**12 CaCl₂·2H₂O**

calcium chloride

Kalziumchlorid

chlorure de calcium

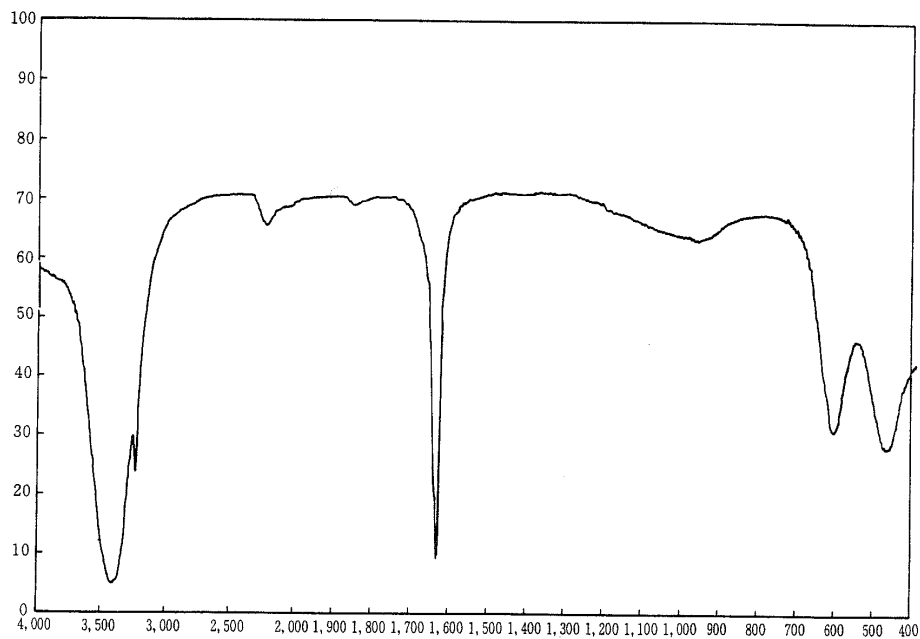


13 $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$

magnesium chloride

Magnesiumchlorid

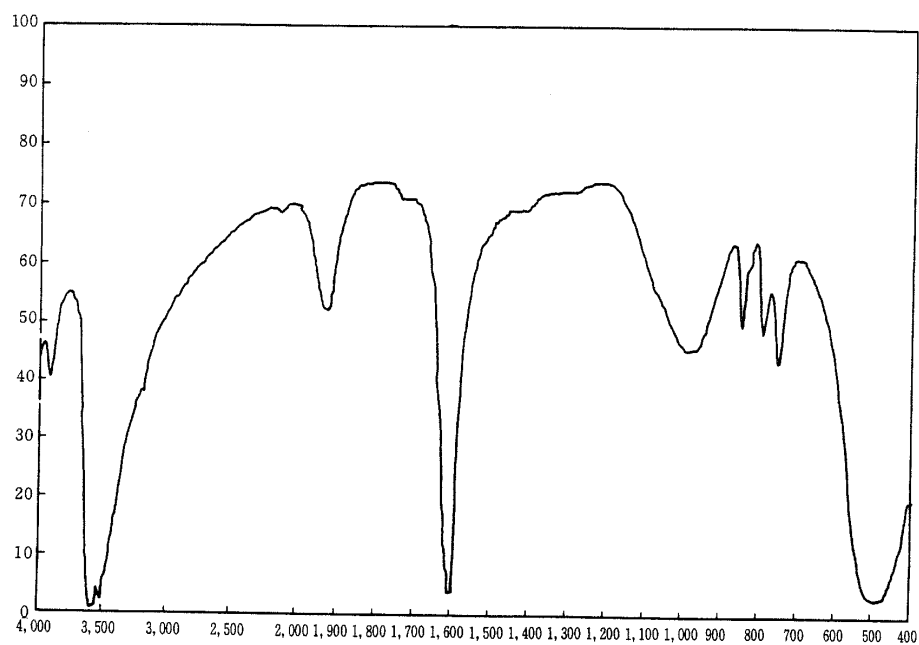
chlorure de magnésium

**14 ZnCl_2**

zinc chloride

Zinkchlorid

chlorure de zinc

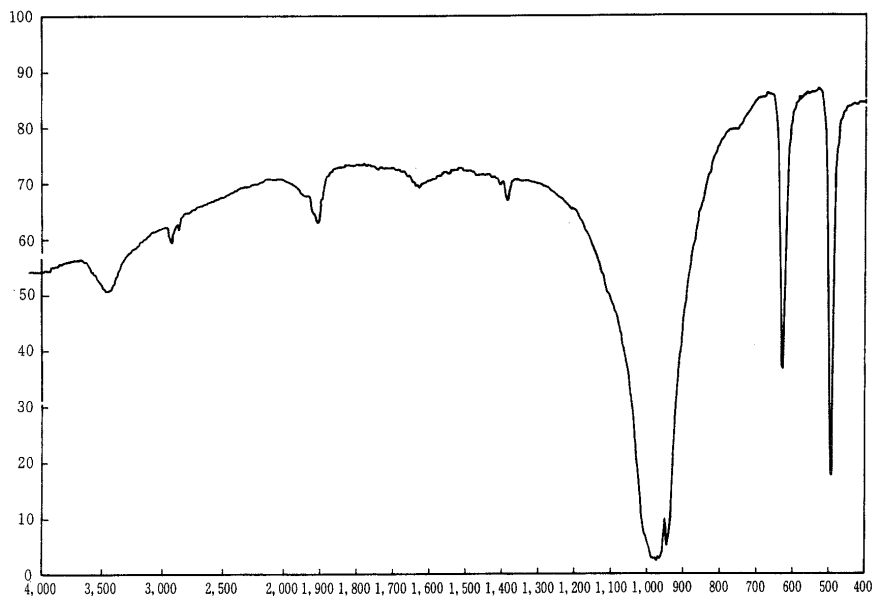


15 KClO_3

potassium chlorate

chlorsäures Kalium

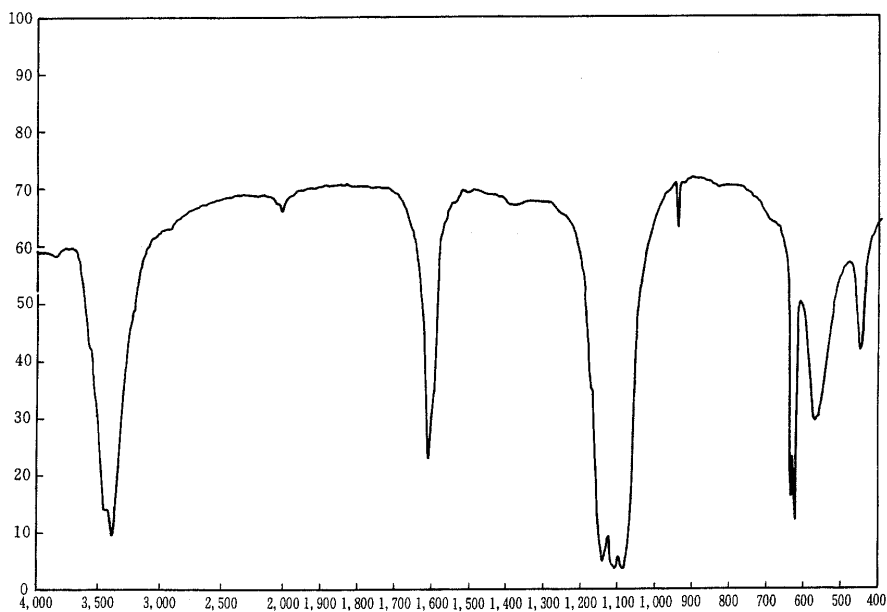
chlorate de potassium

**16 $\text{Ba}(\text{ClO}_4)_2$**

barium perchlorate

Bariumperchlorat

perchlorate de baryum

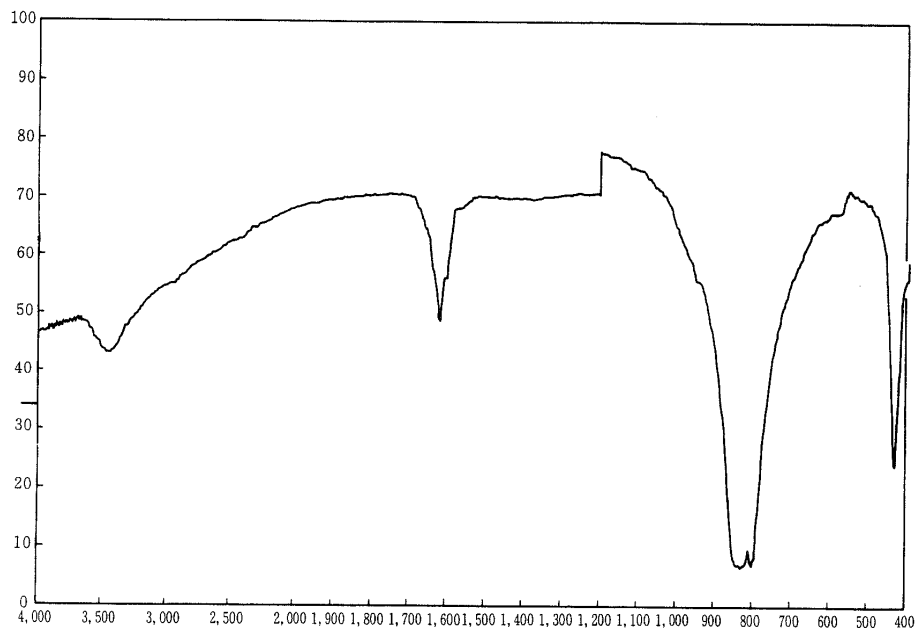


NaClO₄

sodium perchlorate

Natriumperchlorat

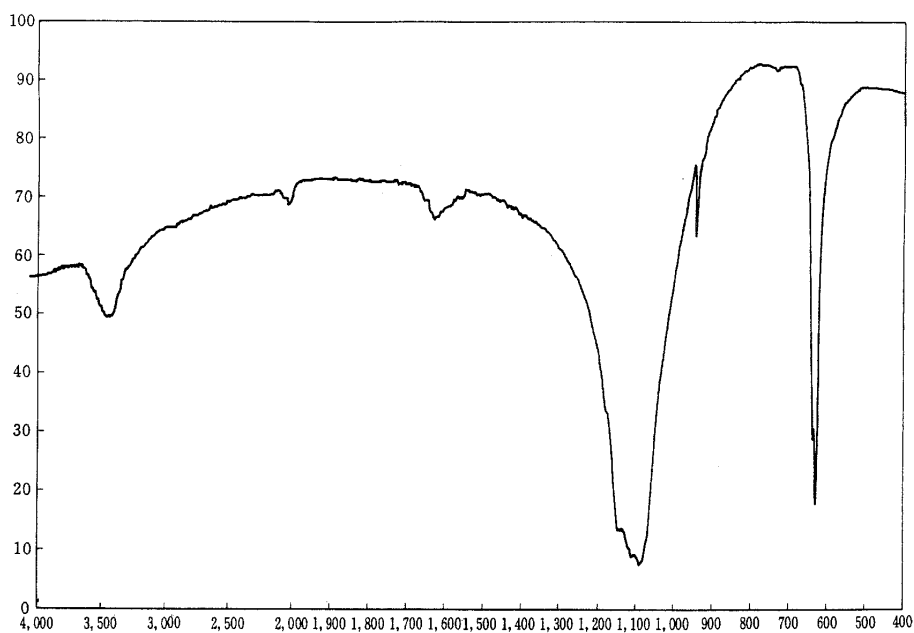
perchlorate de sodium

**17 KClO₄**

potassium perchlorate

Kaliumperchlorit

perchlorate de potassium

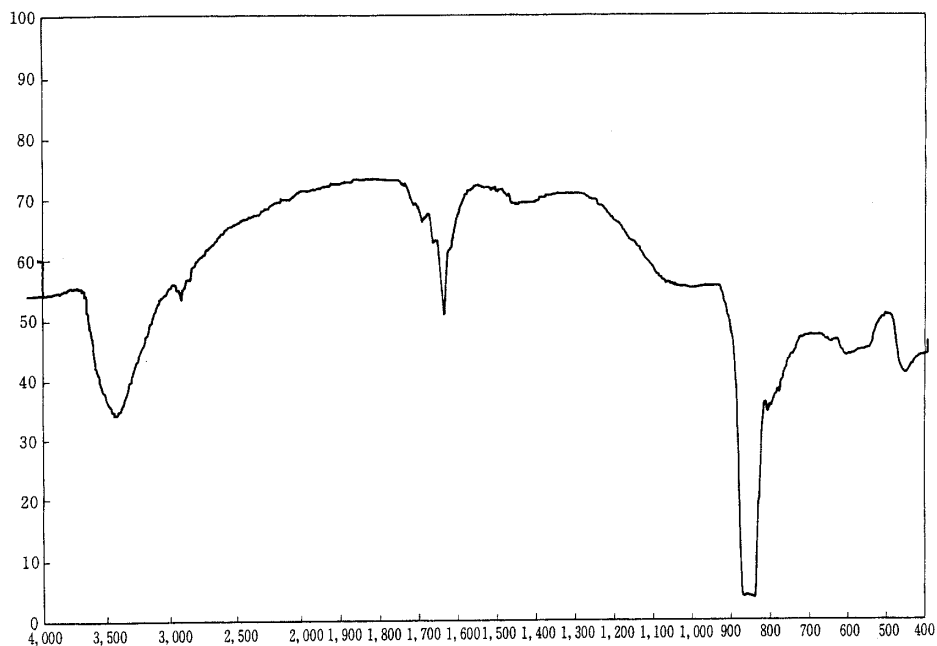


18 HIO₄

periodic acid

Perjodsaure

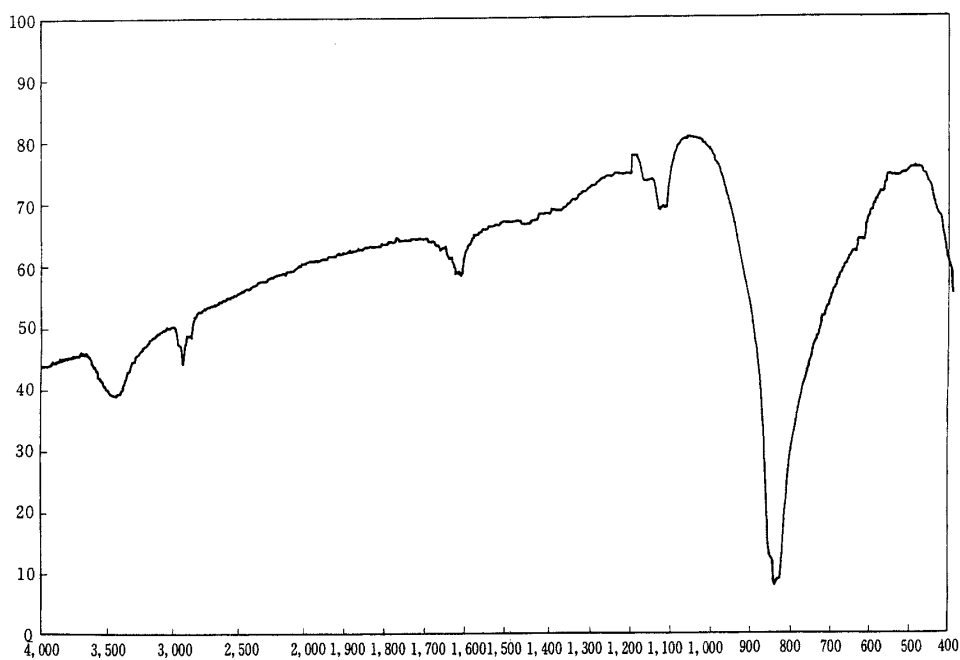
acide periodique

**19 NaIO₄**

sodium periodate

Natriumperiodat

periodate de sodium

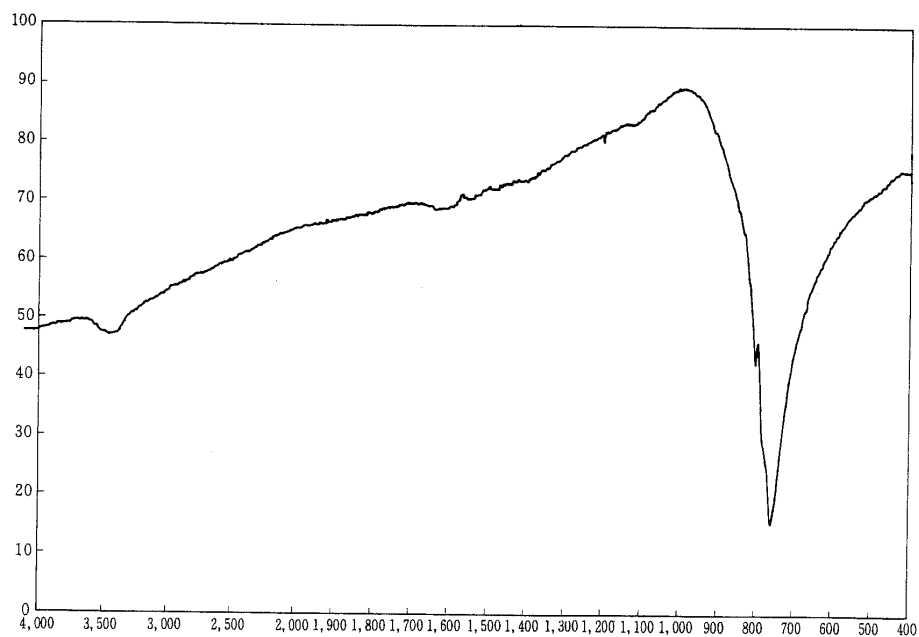


20 KIO_3

potassium iodate

Kaliumjodat

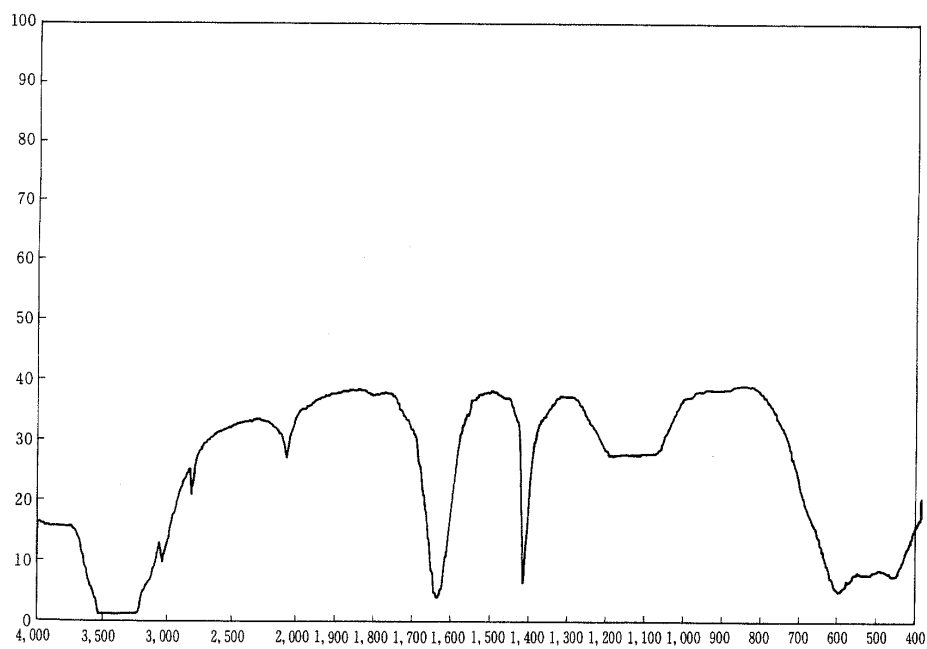
iodate de potassium

**21 CsBr**

cesium bromide

Zasiumbromid

bromide de césium

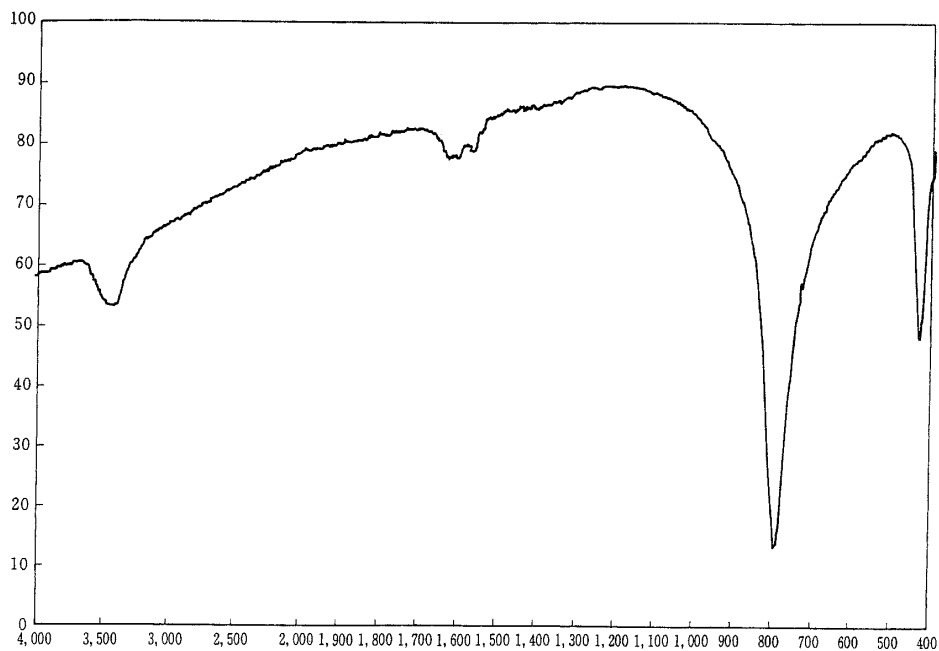
(only CsBr)

22 KBrO₃

potassium bromate

Kaliumbromat

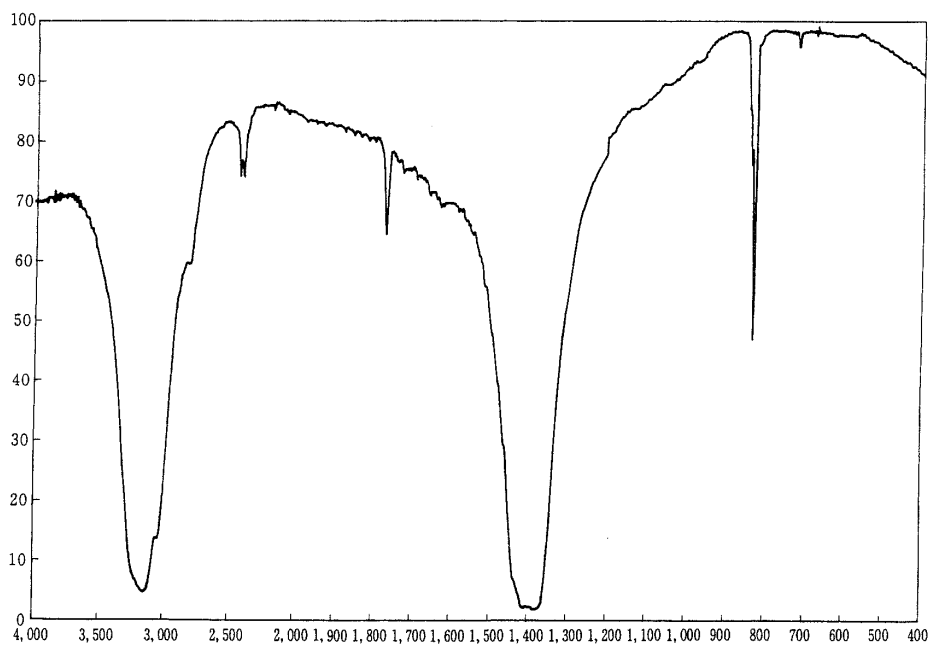
bromate de potassium

**23 NH₄NO₃**

ammonium nitrate

Ammoniumnitrat

nitrate d' ammonium

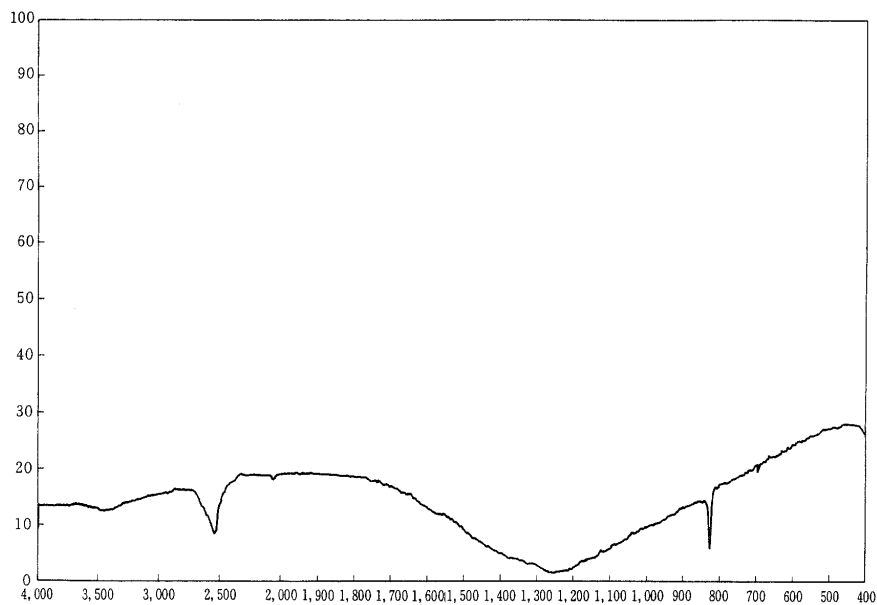


24 NaNO₂

sodium nitrite

Natriumnitrit

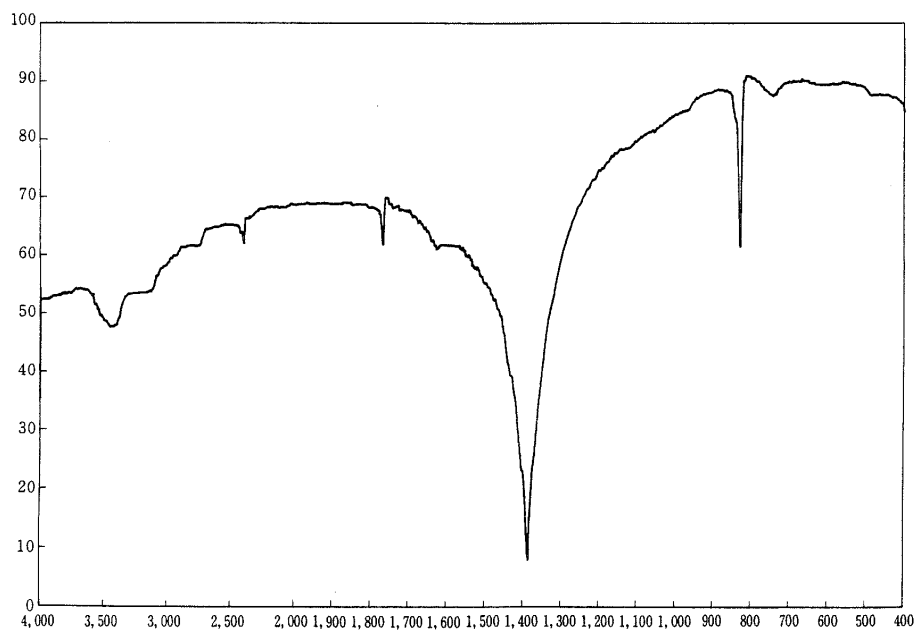
nitrite de sodium

**25 KNO₃**

potassium nitrate

Kaliumnitrat

nitrate de potassium

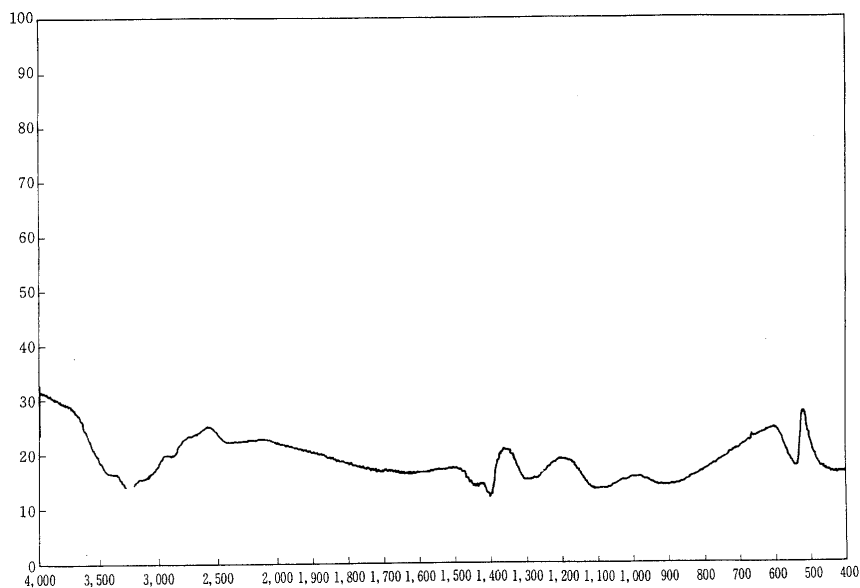


26 $(\text{NH}_4)_3\text{PO}_4$

ammonium tertiary phosphate

tertiäres Ammoniumphosphat

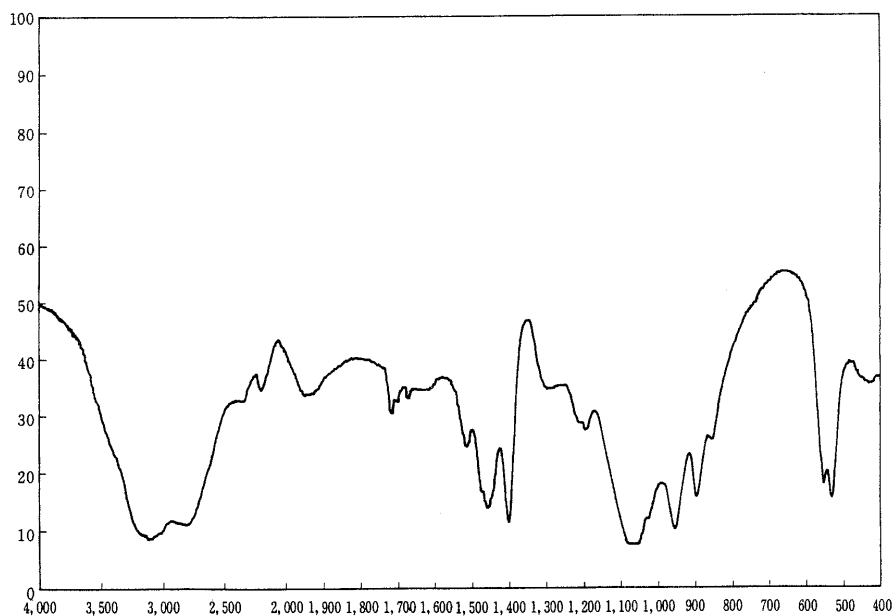
phosphate d'ammonium

**27 $(\text{NH}_4)_2\text{HPO}_4$**

ammonium secondary phosphate

sekundäres Ammoniumphosphat

phosphate hydrogène d'ammonium

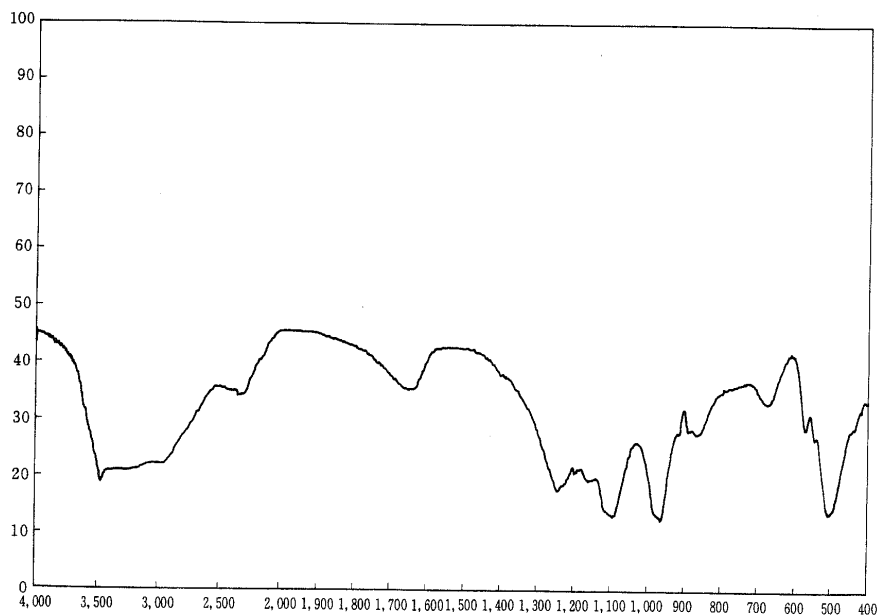


28 CaHPO_4

calcium secondary phosphate

sekundäres Kalziumphosphat

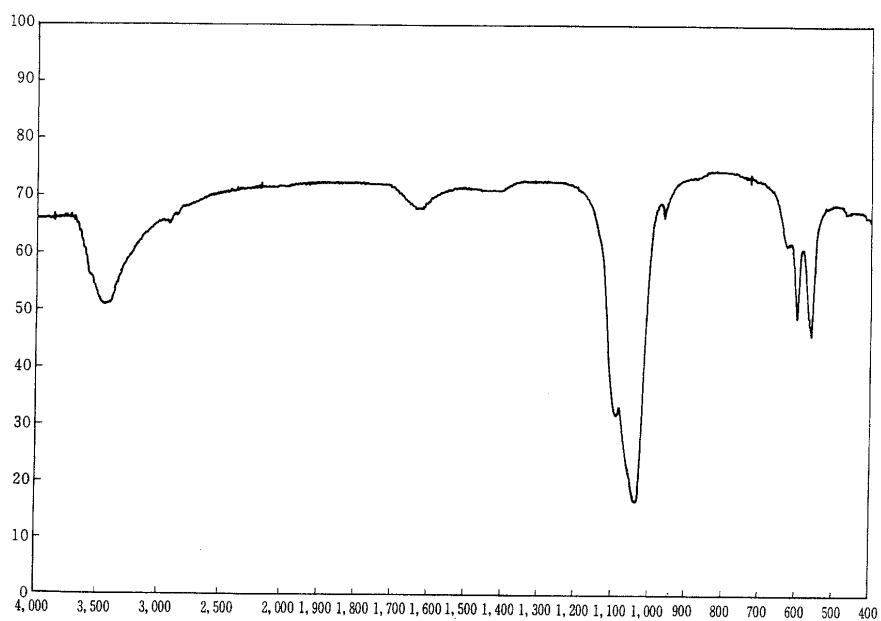
phosphate hydrogene de calcium

**29 $\text{Ca}_3(\text{PO}_4)_2$**

calcium tertiary phosphate

tertiäres Kalziumphosphat

phosphate de calcium

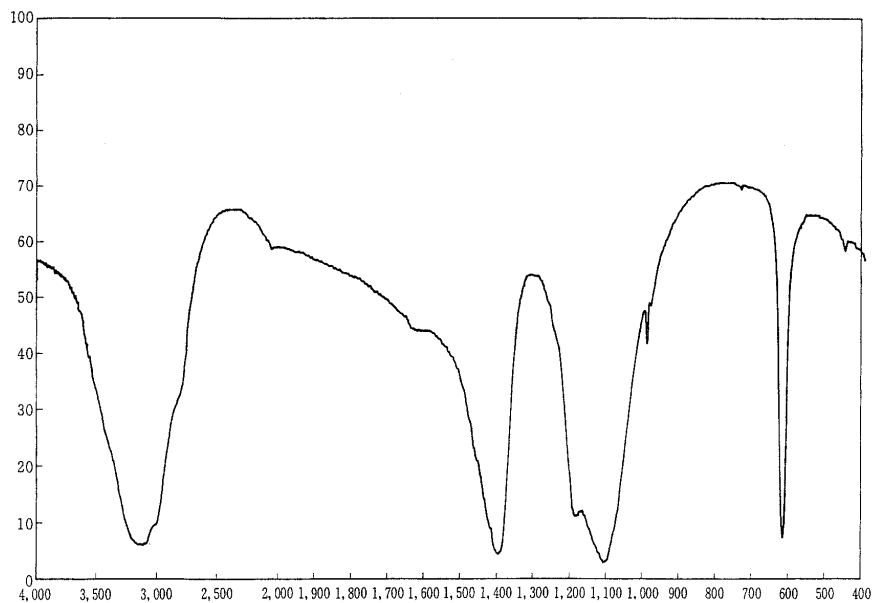


30 $(\text{NH}_4)_2\text{SO}_4$

ammonium sulphate

Ammoniumsulfat

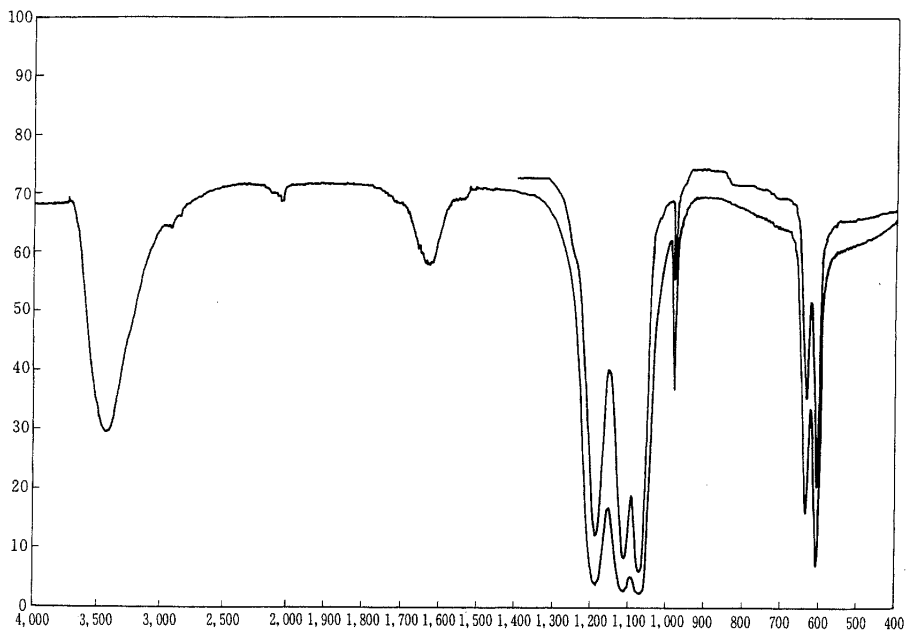
sulfate d'ammonium

**31 BaSO_4**

barium sulphate

Bariumsulfat

sulfate de baryum

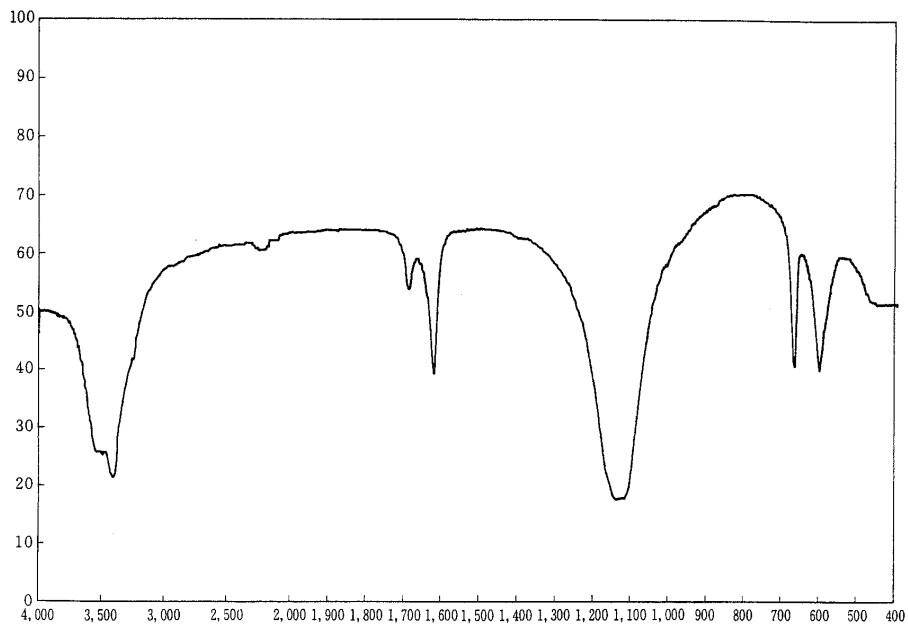


32 $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$

calcium sulphate

Kalziumsulfat

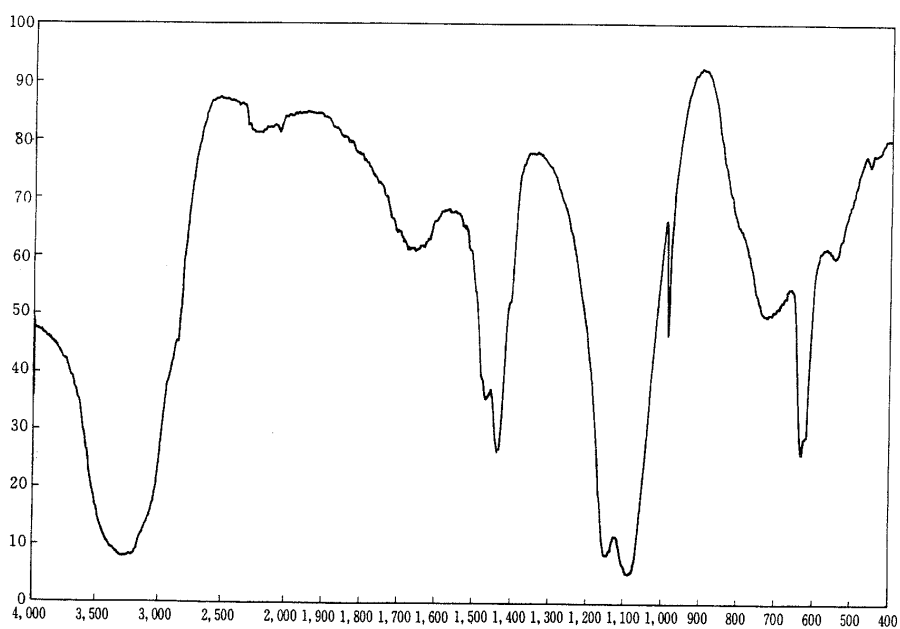
sulfate de calcium

**33 $\text{FeSO}_4(\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$**

ferrous ammonium sulphate(Mohr's salt)

Eisen(II)ammoniumsulfat

sulfate double de fer et d'ammonium

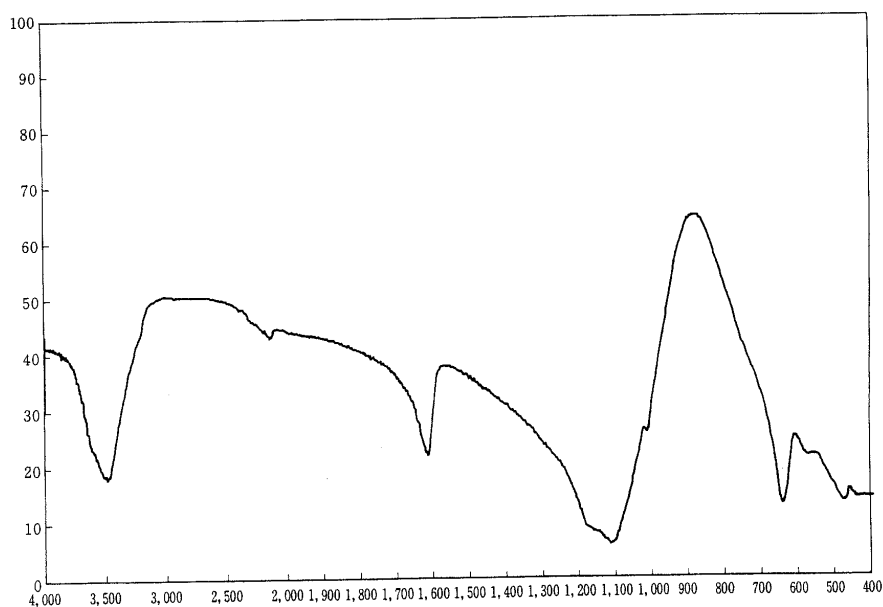


34 $\text{Li}_2\text{SO}_4 \cdot \text{H}_2\text{O}$

lithium sulphate

Lithiumsulfat

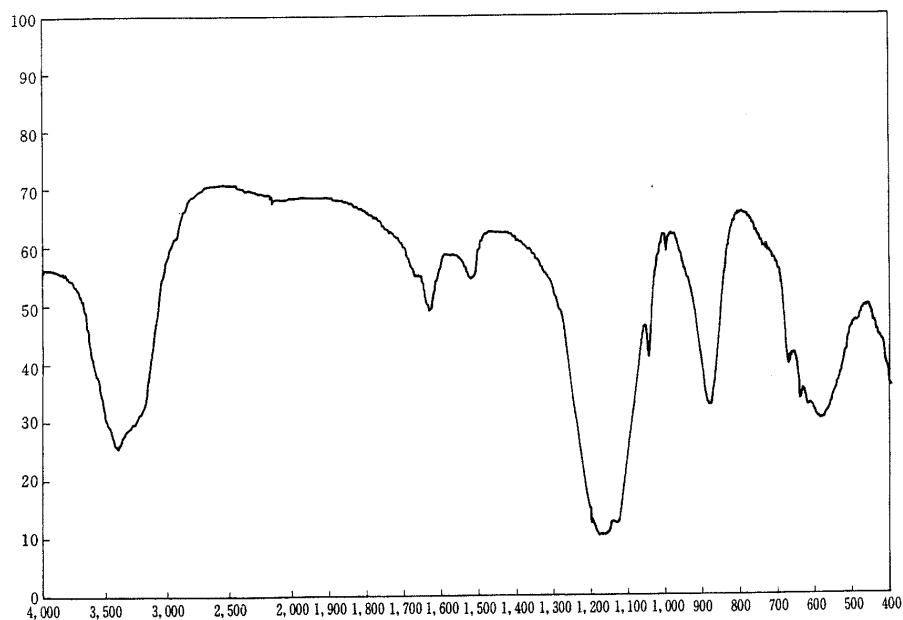
sulfate de lithium

**35 MgSO_4**

magnesium sulphate

Magnesiumsulfat

sulfate de magnésium

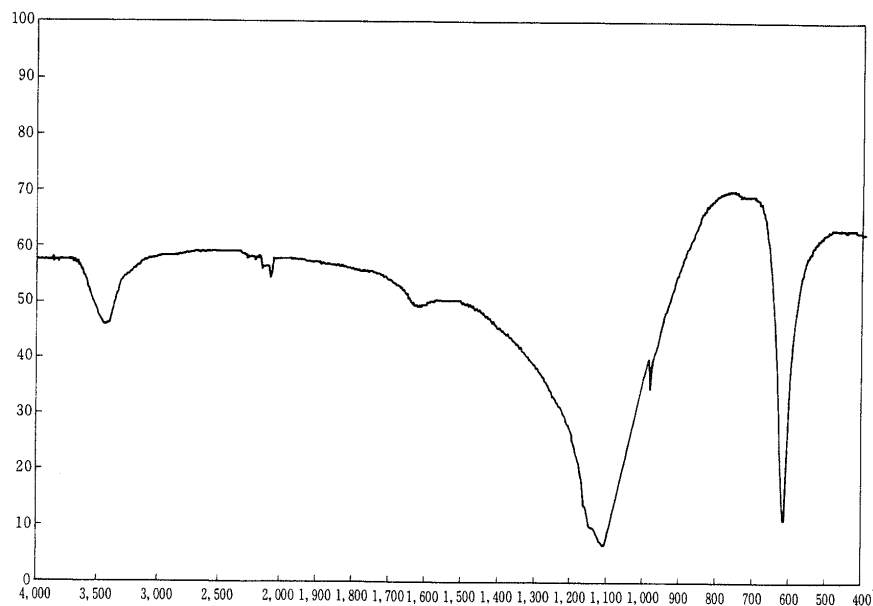


36 K_2SO_4

potassium sulphate

Kaliumsulfat

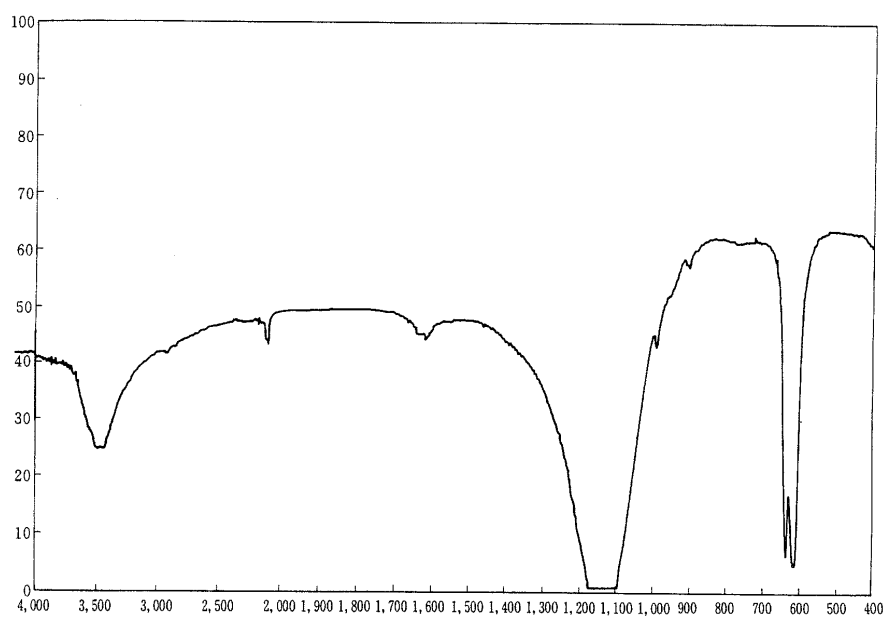
sulfate de potassium

**37 Na_2SO_4**

sodium sulphate

schwefelsaures Natrium

sulfate de sodium

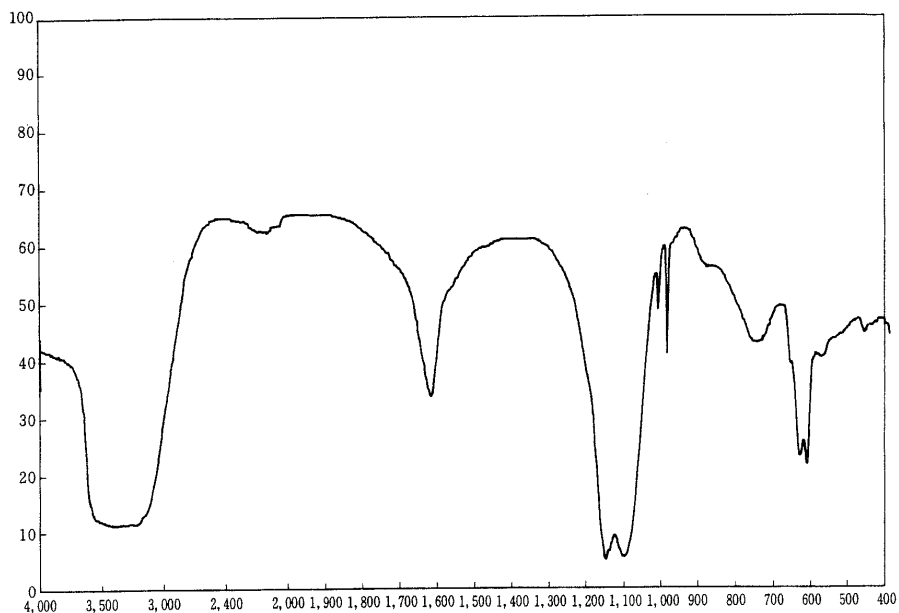


38 $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$

zinc sulphate

Zinksulfat

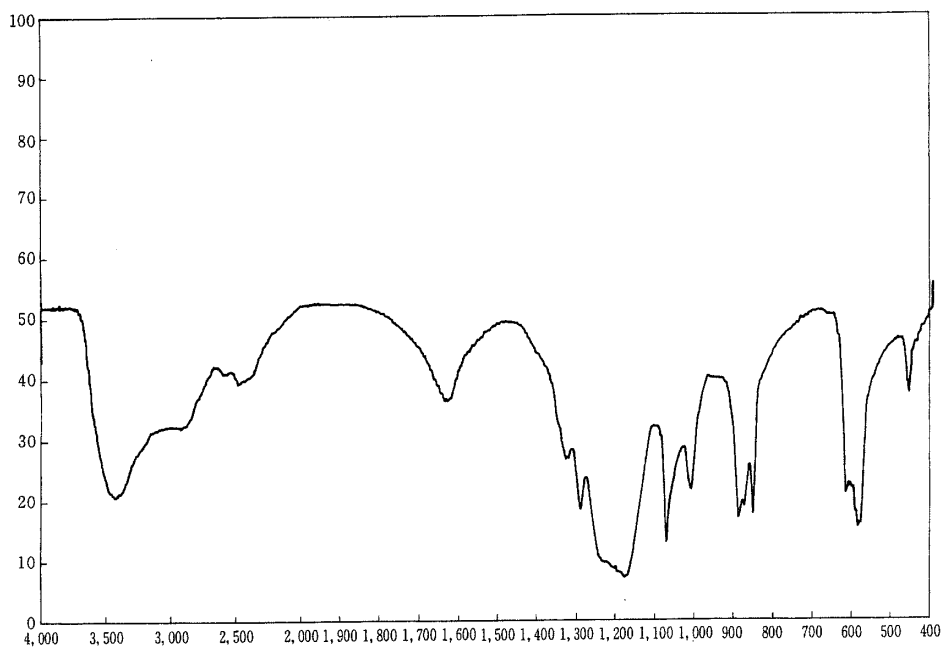
sulfate mecle zinc

**39 $\text{NaHSO}_4 \cdot \text{H}_2\text{O}$**

sodium hydrogen sulphate

Natriumhydrogensulfat

sulfate hydrogène de sodium

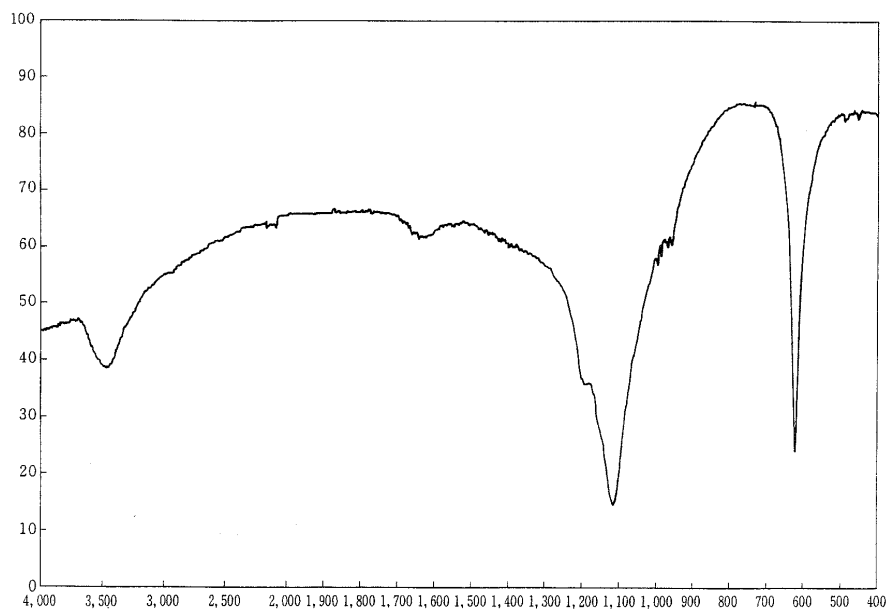


40 $\text{K}_2\text{SO}_3 \cdot 2\text{H}_2\text{O}$

potassium sulphite

Kaliumsulfid

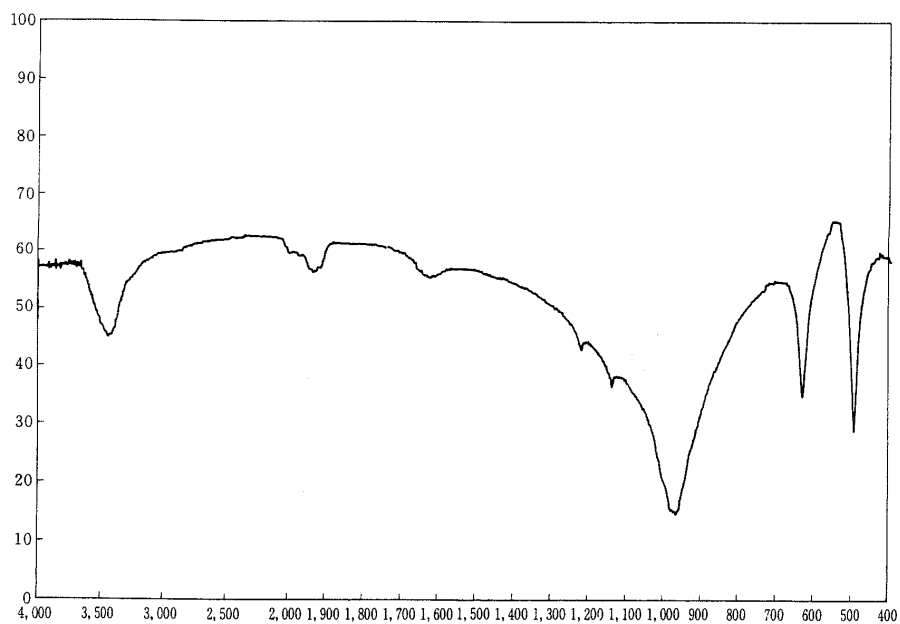
sulfite de potassium

**41 Na_2SO_3**

sodium sulphite

Natriumsulfid

sulfite de sodium

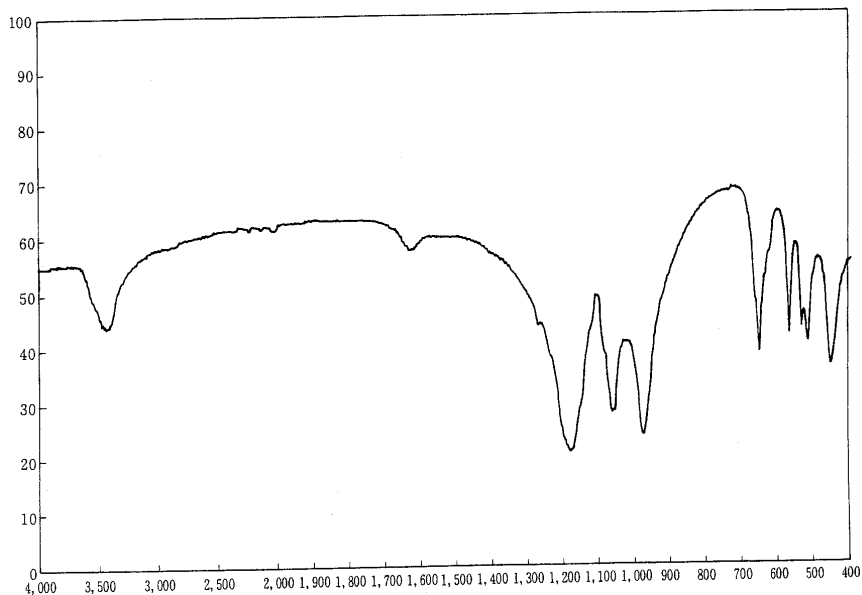


42 NaHSO₃

sodium hydrogen sulphite

Natriumhydrogensulfit

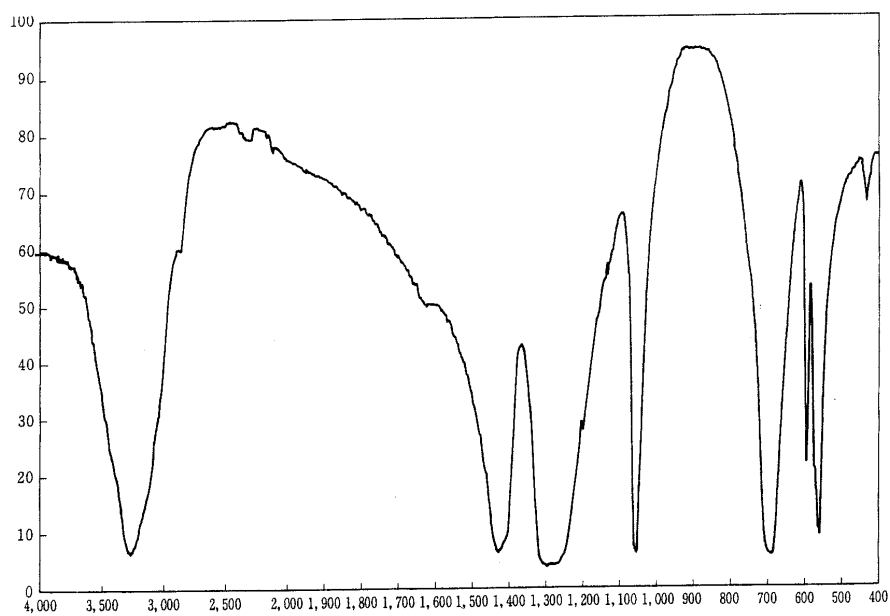
sulfite hydrogène de sodium

**43 (NH₄)₂S₂O₈**

ammonium persulphate

Ammoniumpersulfat

persulfate d'ammonium

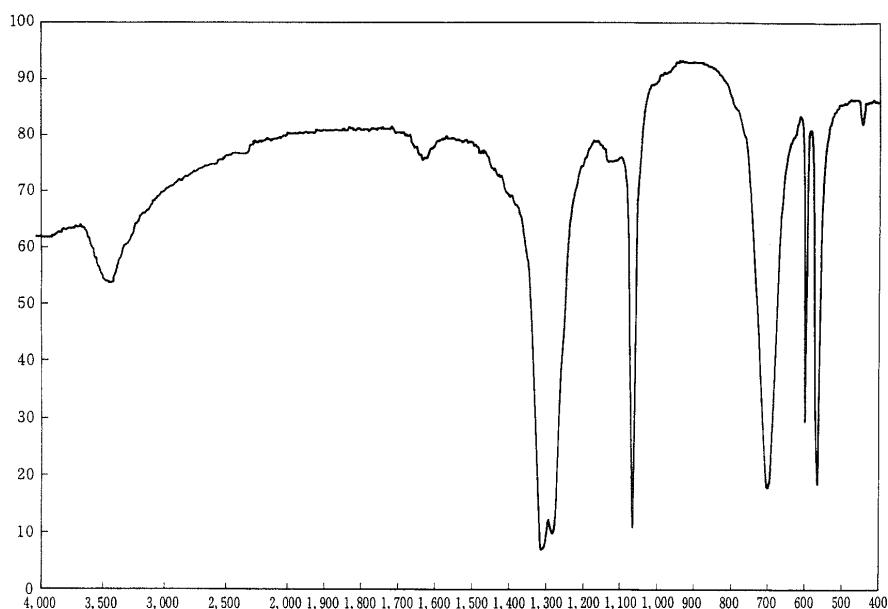


44 $\text{K}_2\text{S}_2\text{O}_8$

potassium persulphate

Kaliumperoxydisulfat

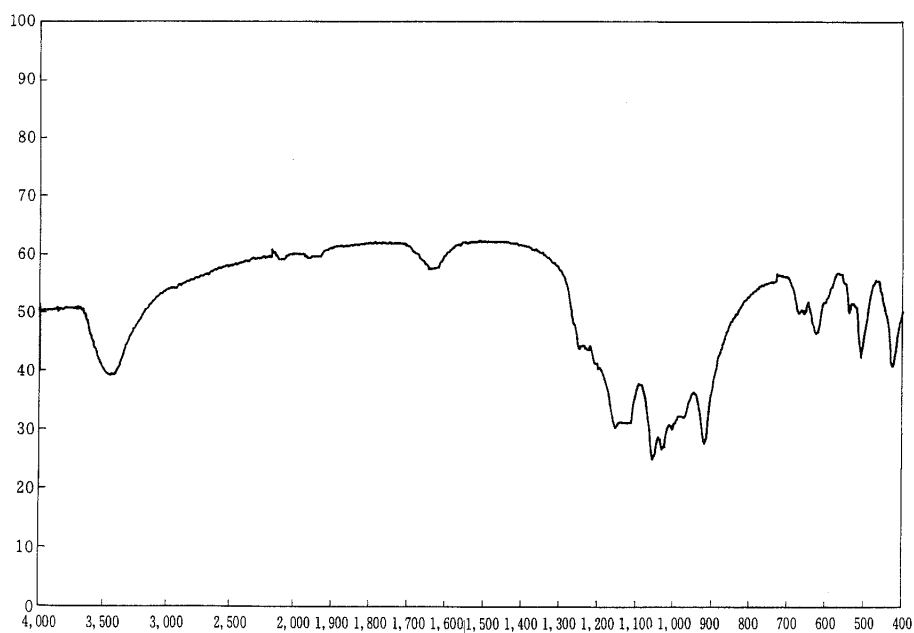
perdisulfate de potassium

**45 $\text{Na}_2\text{S}_2\text{O}_4$**

sodium hydrosulphite

Natriumhydrosulfit

hydrosulfite de sodium

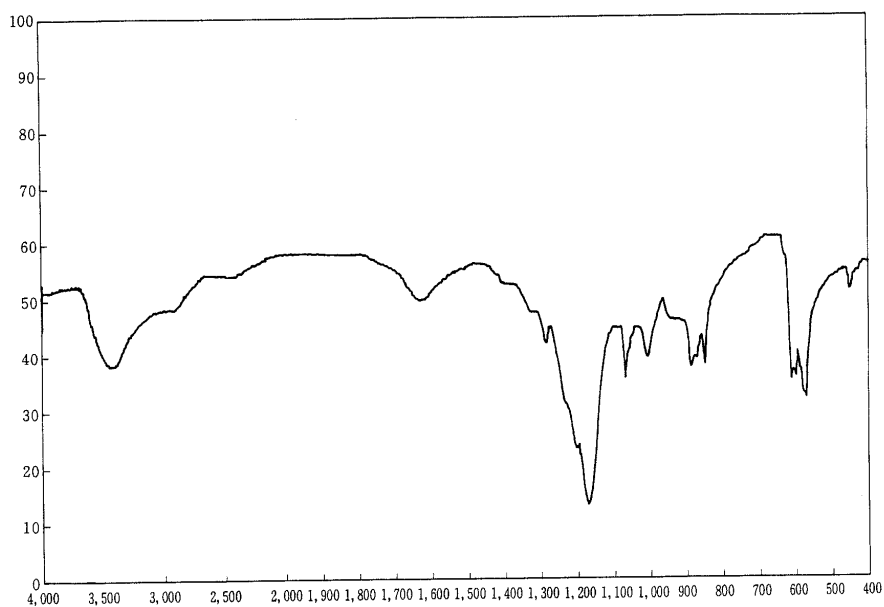


46 $\text{Na}_2\text{S}_2\text{O}_7$

sodium pyrosulphate

Natriumpyrosulfat

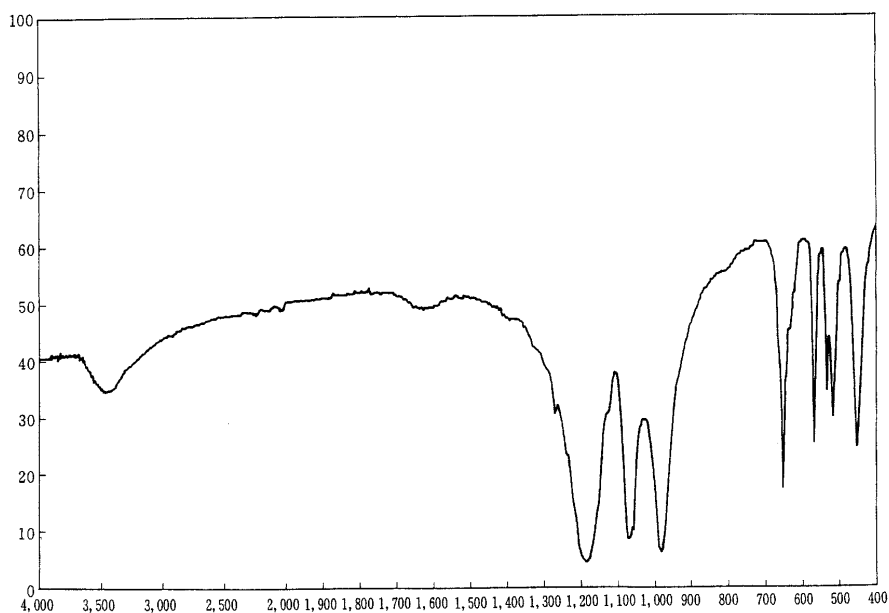
pyrosulfate neutre de sodium

**47 $\text{Na}_2\text{S}_2\text{O}_5$**

sodium metabissulphite

Natriummetabisulfit

metabisulfite de sodium

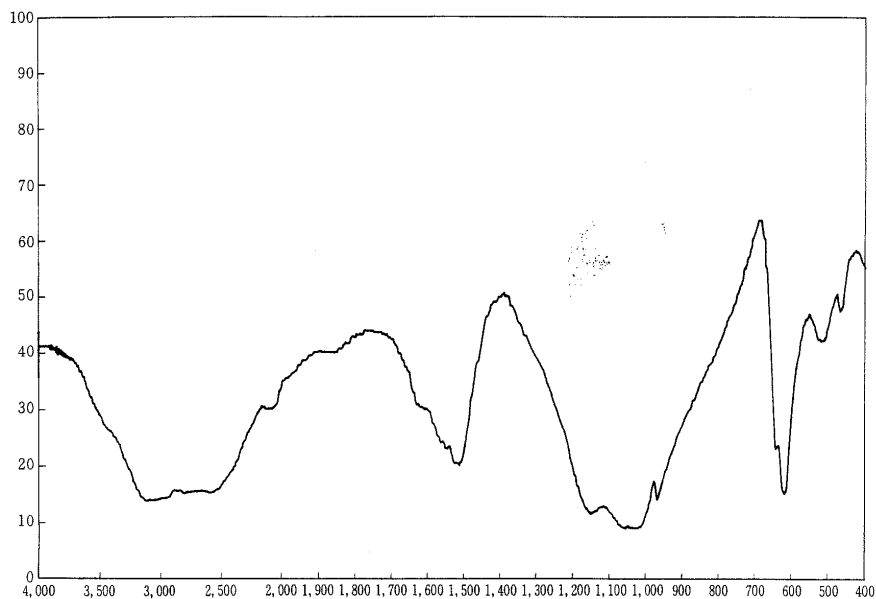


48 $(\text{NH}_2)_2 \cdot 1/2\text{H}_2\text{SO}_4$

hydrazine sulphate

Hydrazinsulfat

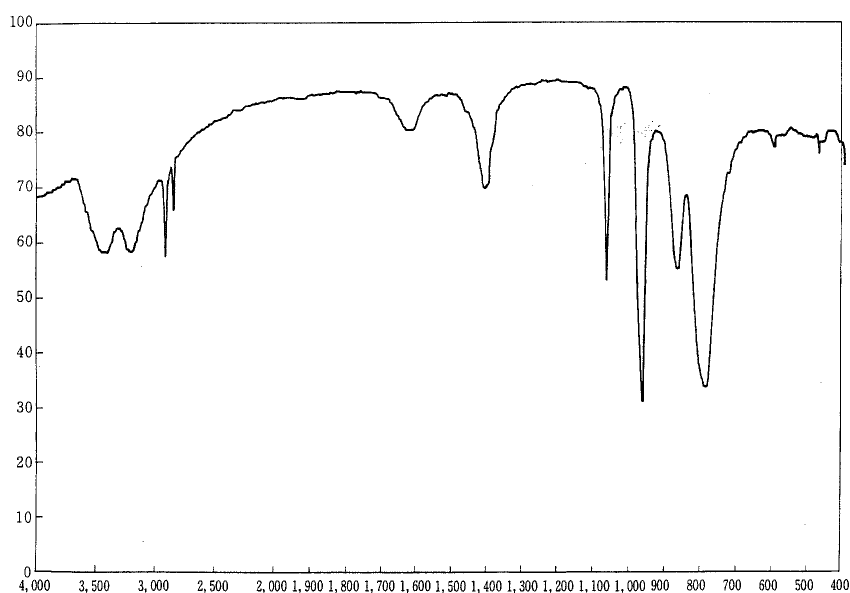
sulfate d'hydrazinium

**49** $(\text{NH}_4)_3 [\text{P}(\text{Mo}_3\text{O}_{10})_4]$

ammonium phosphomolybdate

Ammoniumphosphomolybdat

phosphomolybdate d'ammonium

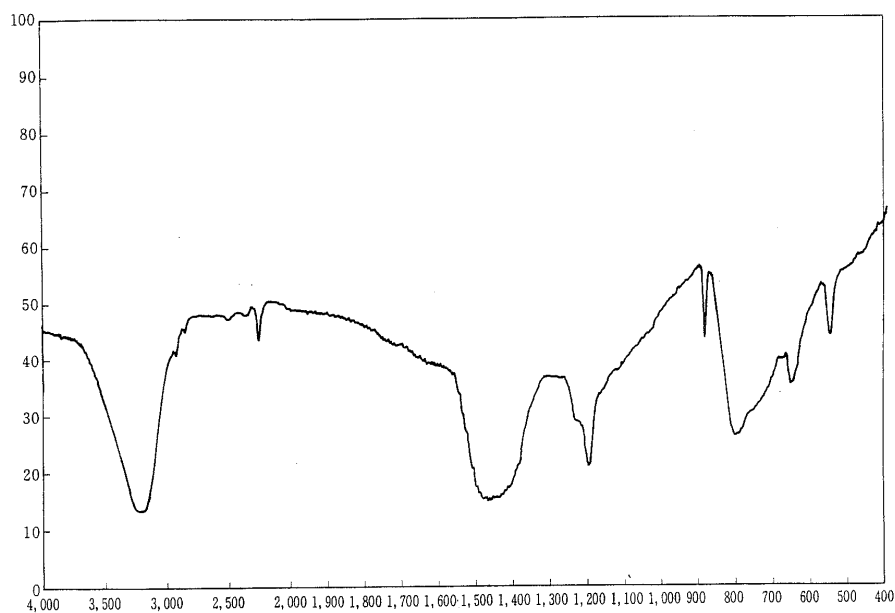


50 B₂O₃

boron trioxide

Bortrioxid

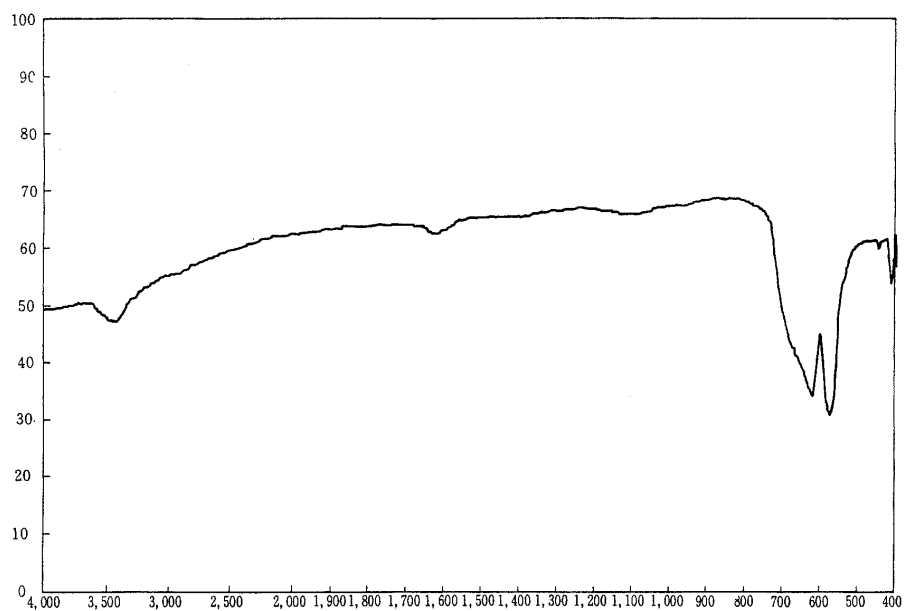
trioxyde de bore

**51 Cr₂O₃**

chromic oxide

Chromsesquioxid

sesquioxyde de chrome

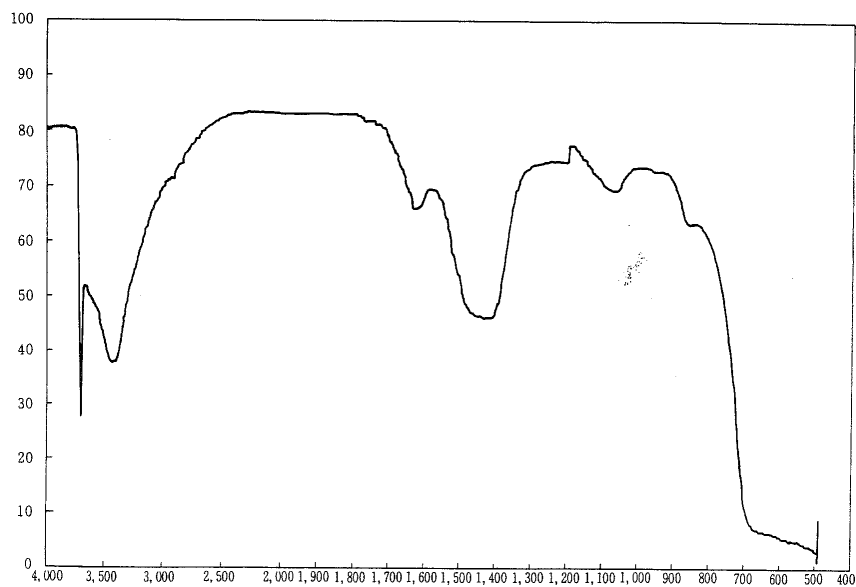


52 MgO

magnesium oxide

Magnesiumoxid

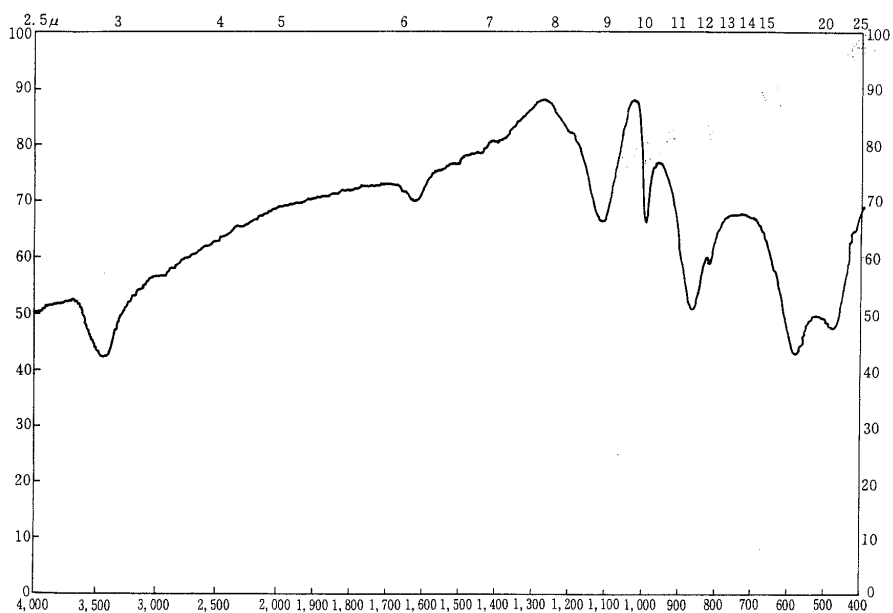
oxyde de magnésium

**53 MoO₃**

molybdenum trioxide

Molybdansaureanhydrid

anhydride molybdique

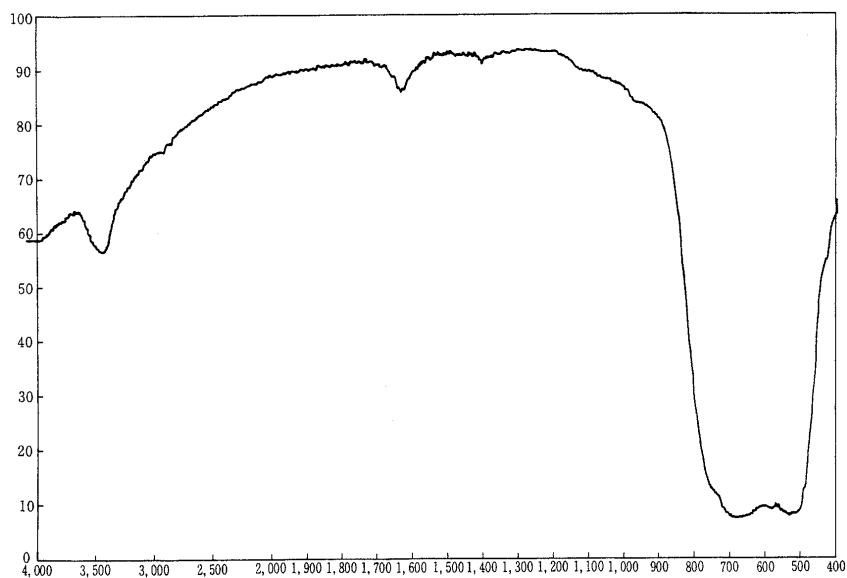


54 TiO₂

titanium dioxide

Titansäureanhydrid

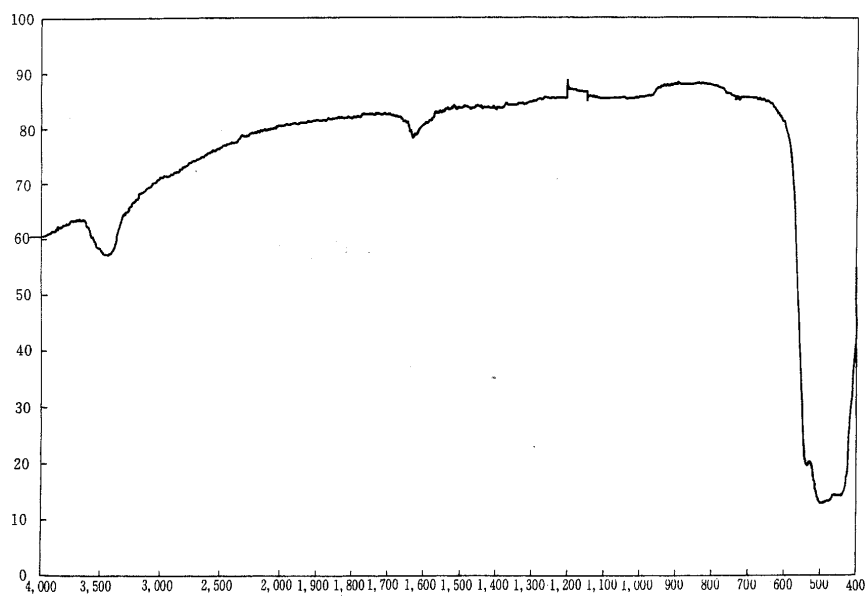
anhydride titanique

**55 ZnO**

zinc oxide

Zinkoxid

zincite



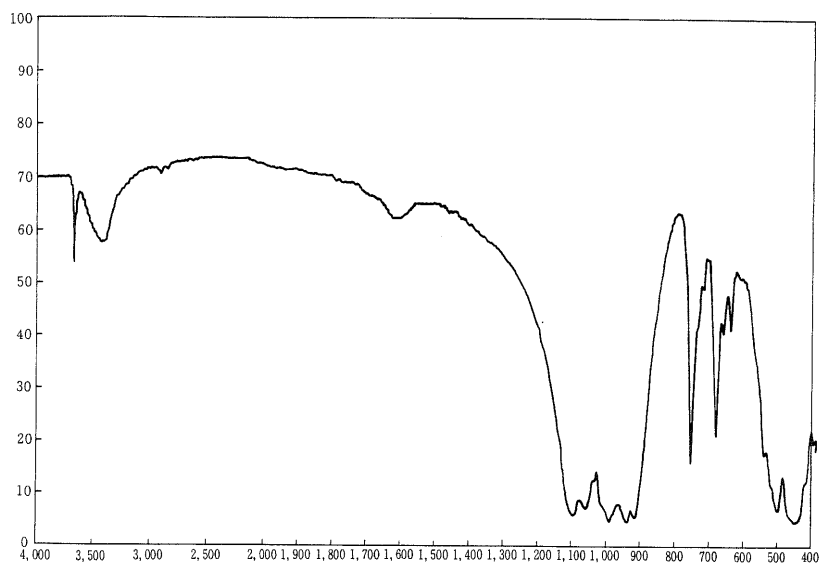
56

asbestos

Bergflachs

amiente

(Merck, F.R. Germany)

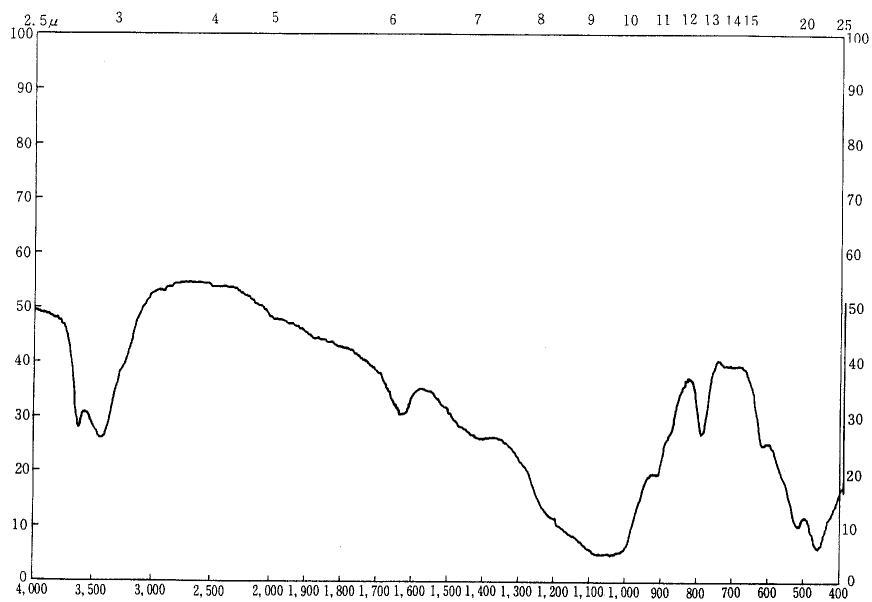


57

bentonite

Bentonit

bentonite

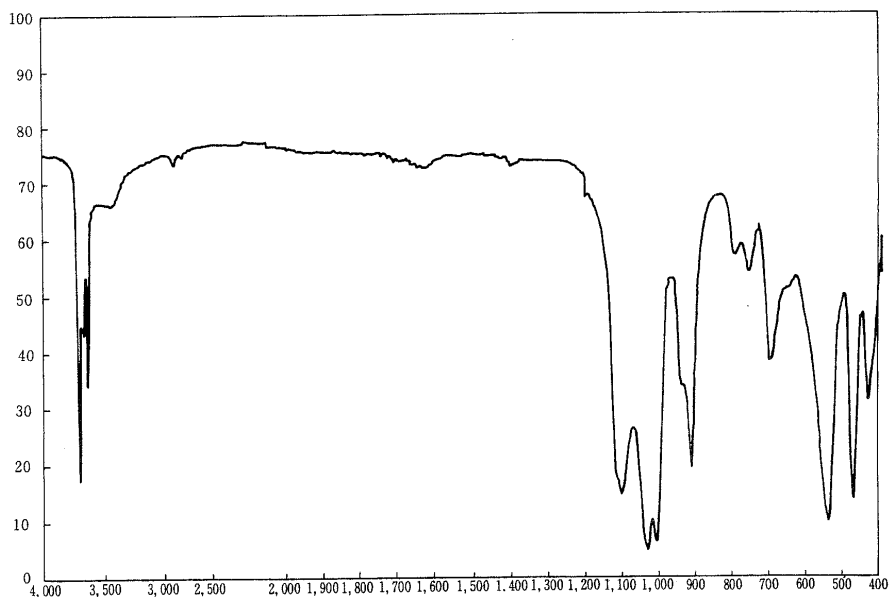


58 $\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2 \cdot 2\text{H}_2\text{O}$

kaolinite

Kaolinit

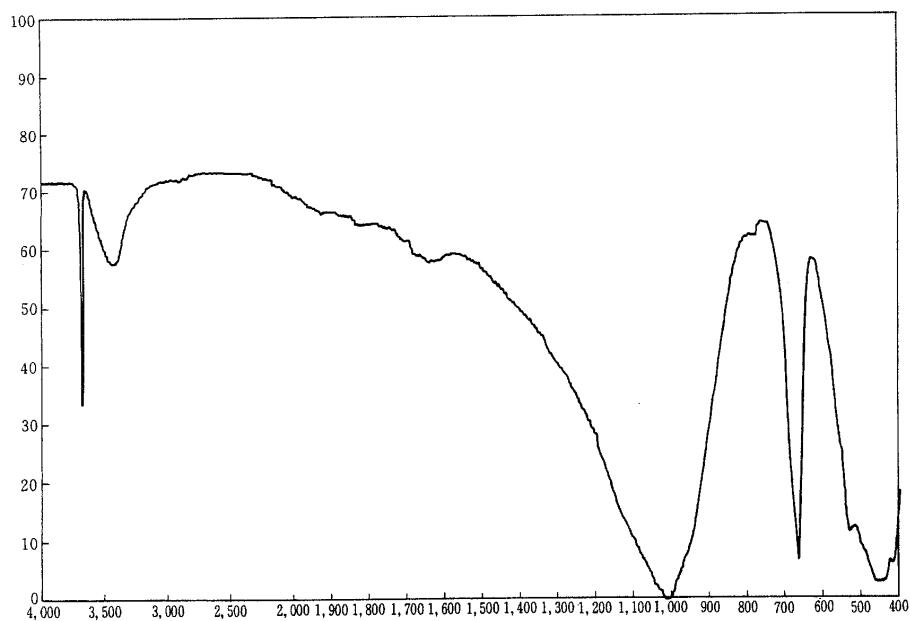
kaolinite

**59 $\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$**

talc

Talk

talc

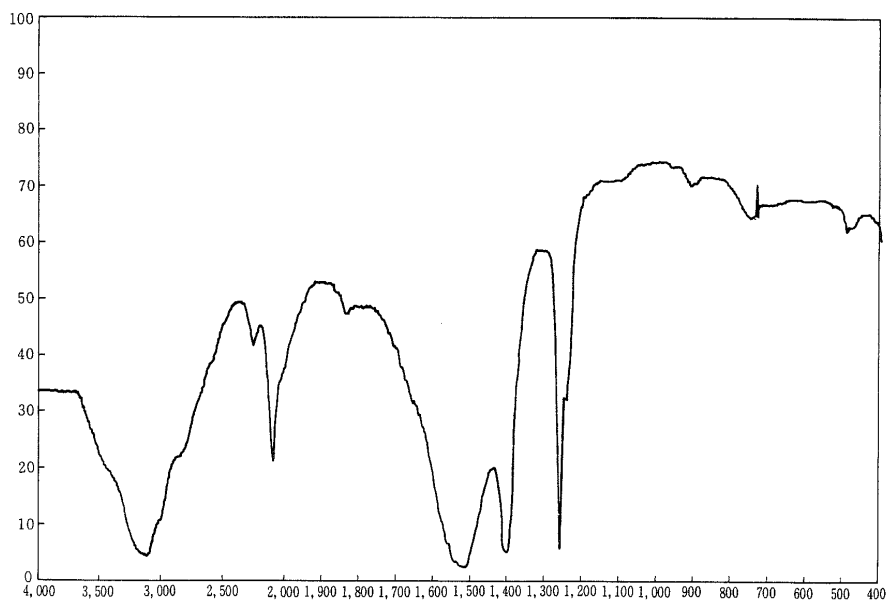


60 NH_4F

ammonium fluoride

Ammoniumfluorid

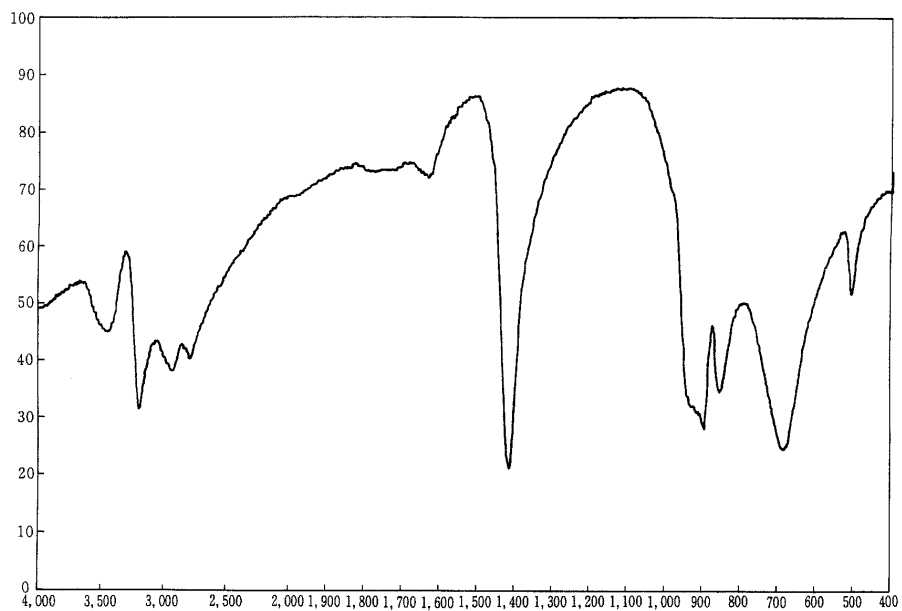
fluorure d' ammonium

**61 NH_4VO_3**

ammonium metavanadate

Ammoniummetavanadat

metavanadate d' ammonium

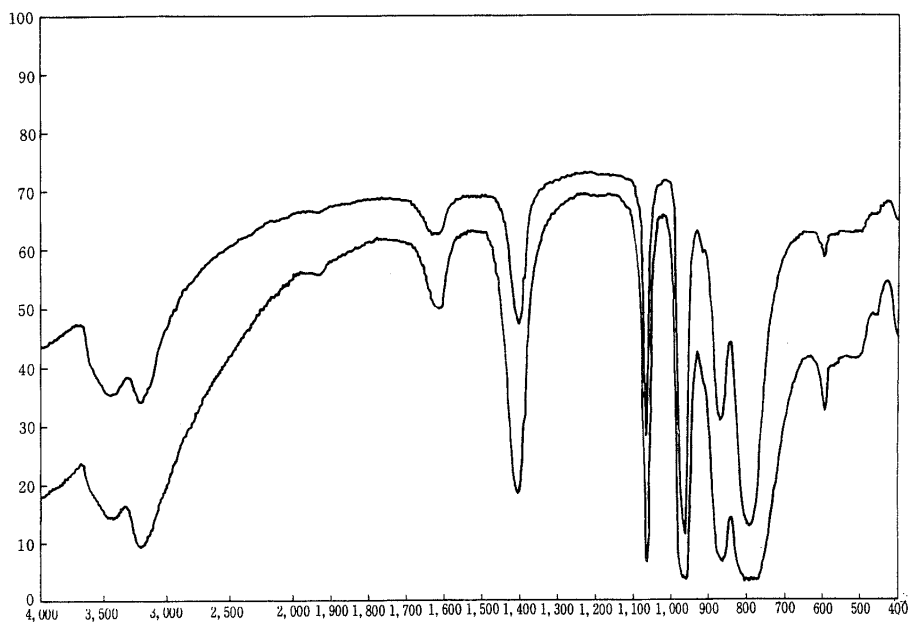


62 $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24}$

ammonium molybdate

Ammoniummolybdat

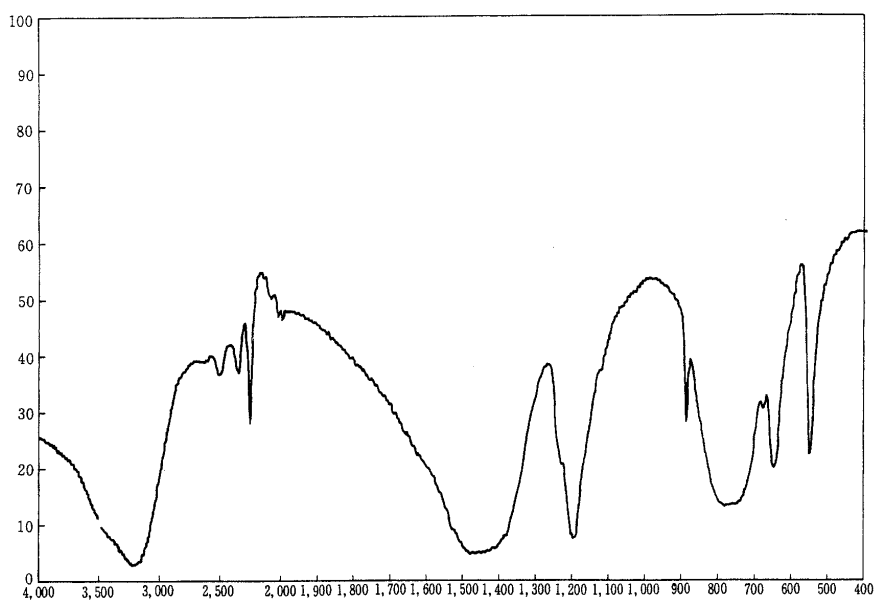
molybdate d' ammonium

**63 H_3BO_3**

boric acid

Borsäure

acide borique

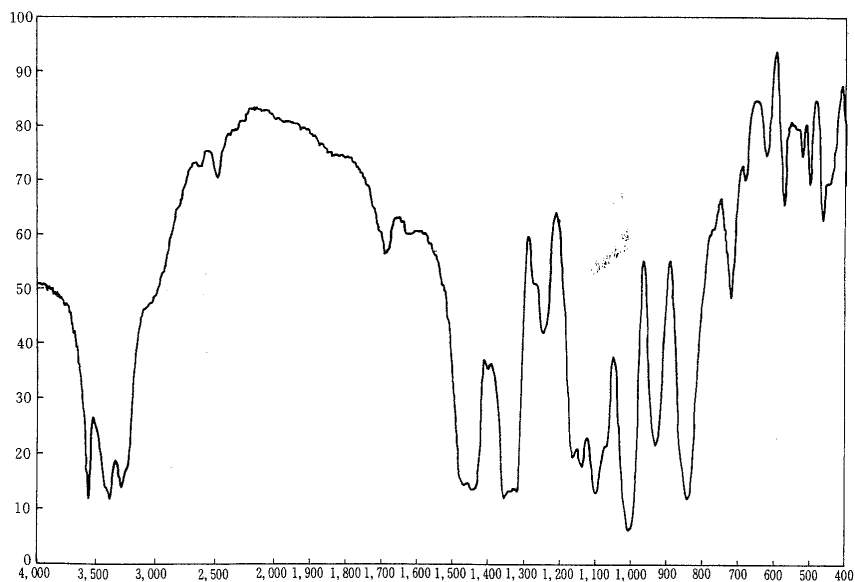


64 $\text{K}_2\text{B}_4\text{O}_7 \cdot 4\text{H}_2\text{O}$

potassium borate

Kaliumborat

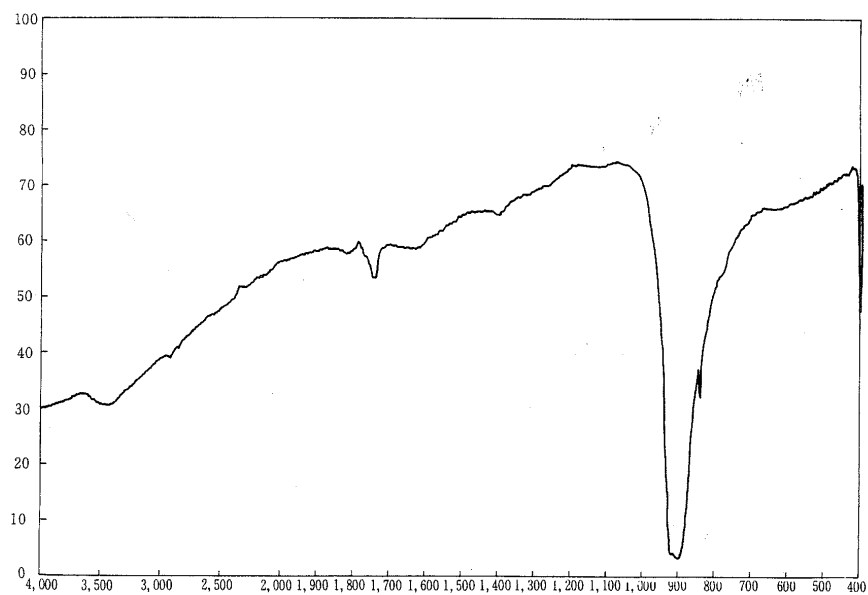
borate de potassium

**65 KMnO_4**

potassium permanganate

Kaliumpermanganat

permanganate de potassium

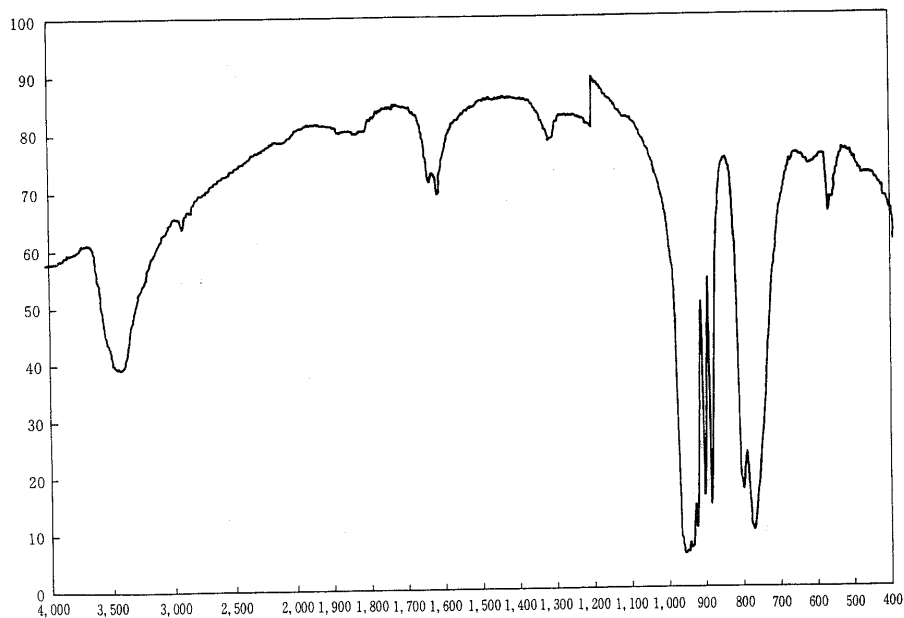


66 $\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$

sodium dichromate

Natriumdichromat

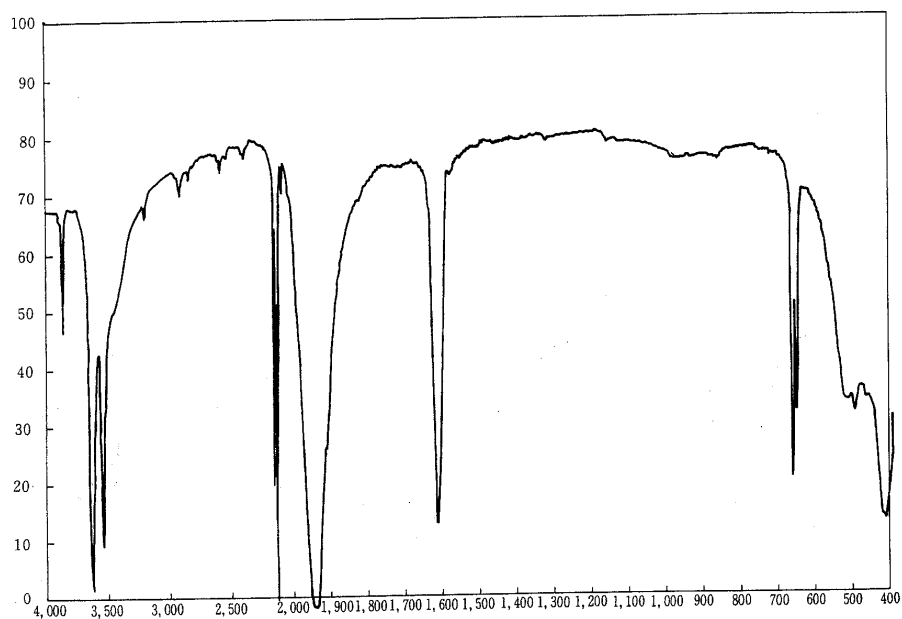
bichromate de sodium

**67 $\text{Na}_2\text{Fe}(\text{CN})_5\text{NO}$**

sodium nitroferricyanide

Nitroprussidnatrium

nitroprussiate de sodium



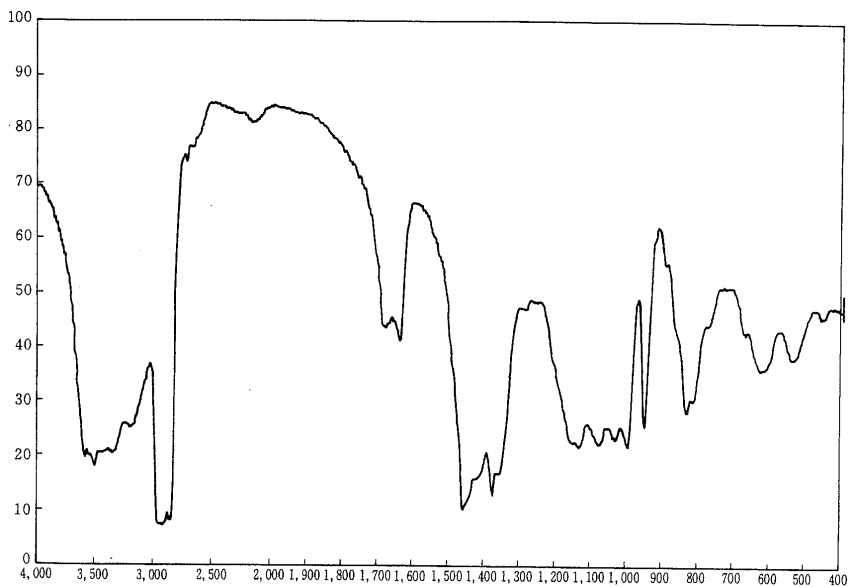
68 $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$

sodium tetraborate

Natriumtetraborat

tetraborate de sodium

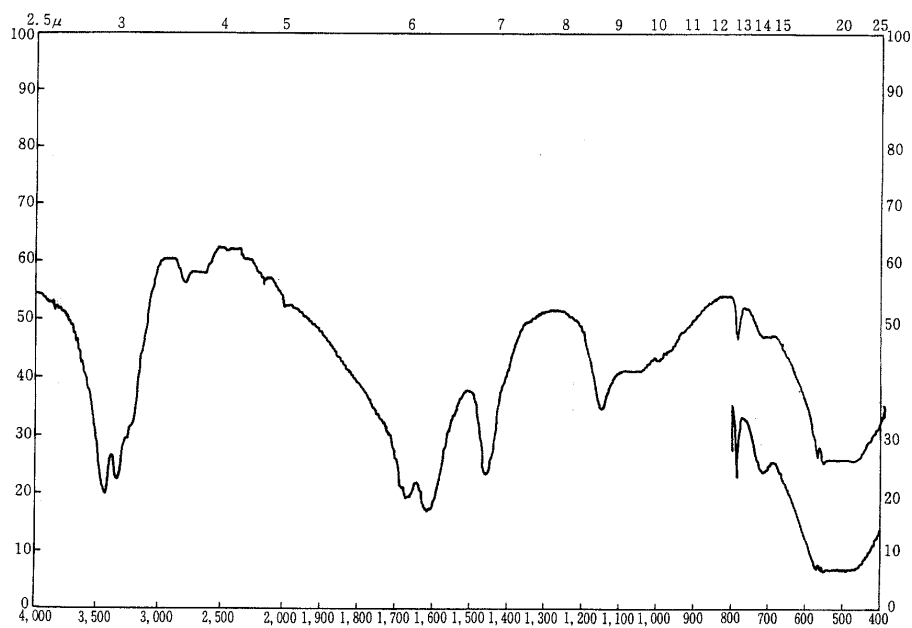
(with nujol)

**69 $(\text{NH}_2)_2\text{CO}$**

urea

Harnstoff

uree carbamide



70 Na_2HAsO_4

disodium hydrogenarsenate

Dinatriumhydrogenarsenat

arseniate hydrogène disodique

