

Englisch

Hinweise:

- Es ist auf eine gut lesbare und saubere Darstellung zu achten
- Jede Aufgabe ist direkt auf das Aufgabenblatt in dem dafür vorgesehenen Feld zu lösen
- Erlaubte Hilfsmittel: An der Prüfung abgegebene Wörterbücher (Allg. + Fachwörterbuch Chemie)
- Die Punktzahl von Teil 1 beträgt 44 und 29 für Teil 2 (Teil 1 zählt 2/3, Teil 2 zählt 1/3 der Note); Es gilt der Notenschlüssel der Expertengruppe
- Prüfungszeit: 60 Minuten (Teil 1 ca. 40 Minuten, Teil 2 ca. 20 Minuten)

Die Expertengruppe wünscht Ihnen gutes Gelingen und viel Erfolg!

Name, Vorname:

Note

Teil 1: Übersetzung englischer Fachtext ins Deutsche

Bitte übersetzen Sie den Text der Originalliteratur auf der 2. Seite und schreiben Sie die Übersetzung auf die 5. Seite und deren Rückseite.

- Hinweise :*
1. Jeder übersetzte Satz muss auf einer neuen Zeile begonnen werden.
 2. Namen, Titel und Quellenangabe des Textes müssen nicht übersetzt werden

Organic Syntheses, Coll. Vol. 8, p.16 (1993); Vol. 67, p.187 (1989).

**N-ACETYL-N-PHENYLHYDROXYLAMINE VIA CATALYTIC
TRANSFER HYDROGENATION OF NITROBENZENE USING
HYDRAZINE AND RHODIUM ON CARBON**
[Acetamide, *N*-hydroxy-*N*-phenyl-]

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1. Procedure

*Caution! Nitrobenzene and hydrazine are both toxic. Phenylhydroxylamine and *N*-acetyl-*N*-phenylhydroxylamine are both suspected carcinogens.*

A. *N*-Phenylhydroxylamine. Wet, 5% rhodium on carbon (1.1 g) (Note 1), tetrahydrofuran (200 ml) (Note 2), and nitrobenzene (41.0 g) (Note 3) are introduced into a 500-mL, three-necked, roundbottomed flask fitted with a mechanical stirrer, a thermometer, and a condenser.

The mixture is cooled to 15°C and hydrazine hydrate (17.0 g) (Note 4) is introduced into the reaction mixture from a pressureequalized addition funnel over 30 min.

The temperature of the mixture is maintained at 25–30°C throughout the addition by means of an ice–water bath.

After the mixture is stirred for a further 2 hr at 25–30°C, the reaction is complete (Note 5).

The mixture is filtered and the catalyst washed with a little tetrahydrofuran.

The solution is used immediately in the acylation step (Note 6).

B. *N*-Acetyl-*N*-phenylhydroxylamine. To the *N*-phenylhydroxylamine solution in a 1000-mL, threenecked, round-bottomed flask fitted with a mechanical stirrer and a thermometer is added a slurry of sodium bicarbonate (42 g) in water (40 mL).

The mixture is cooled to –4°C in an ice–salt bath before acetyl chloride (26.0 g) (Note 7) is introduced into the well-stirred mixture over 1 hr (Note 8) while the temperature is maintained below 0°C.

Stirring is then continued for 30 min before a solution of sodium hydroxide (20.0 g) in water (200 mL) is added, keeping the temperature below 20°C.

The aqueous phase is separated, the tetrahydrofuran phase is diluted with an equal volume of petroleum ether, the aqueous phase is separated again, and the organic phase is extracted with aqueous 10% sodium hydroxide solution (2 × 50 mL).

The combined aqueous phases are washed with methylene chloride (200 mL) and then neutralized with concentrated hydrochloric acid (cooling employed).

The mixture is extracted with methylene chloride (3 × 100 mL) and the extracts are combined, dried over magnesium sulfate, filtered, and concentrated at reduced pressure (about one-fifth volume) (Note 9).

After the solution is cooled to 40°C, 100 mL of petroleum ether (bp 60–80°C) is added.

The mixture is stirred at 10°C for 39 min before filtering and washing with additional petroleum ether.

The material is dried at room temperature to afford 39.3–40.1 g (79–80%) of *N*-acetyl-*N*-phenylhydroxylamine as a white crystalline solid, mp 66–67°C (lit.2 mp 67–67.5°C) (Note 10).

Teil 2: Grammatik

1. Aufgabe (7 Punkte)

Use the correct future form by using the words in brackets: future simple, progressive or going – to – future.

1 *You have made an appointment with the dentist for Friday morning.*

FRIEND: Shall we meet on Friday morning?

YOU: I can't on Friday _____ (I / go)

2 *You and some friends are planning a holiday in Britain. You have decided to hire a car, but you haven't arranged this yet.*

FRIEND: How do you plan to travel round Britain? By train?

YOU: No, _____ (we / hire)

3 *Your friend has two young children. She wants to go out tomorrow evening. You offer to look after the children.*

FRIEND: I want to go out tomorrow evening, but I haven't got a babysitter.

YOU: That's no problem _____ (I / look after).

4 *You have already arranged to have lunch with Sue tomorrow.*

FRIEND: Are you free at lunchtime tomorrow?

YOU: No, _____ (have lunch)

5 *You are in a restaurant. You and your friend are looking at the menu. Maybe your friend has decided what to have. You ask her/him.*

YOU: What _____? (you / have)

FRIEND: I don't know. I can't make up my mind.

6 *You and a friend are reading. It's getting a bit dark and your friend is having trouble reading. You decide to turn on the light.*

FRIEND: It's getting a bit dark, isn't it? It's difficult to read.

YOU: Yes _____ (I / turn on)

7 *You and a friend are reading. It's getting a bit dark and you decide to turn on the light. You stand up and walk towards the light switch.*

FRIEND: What are you doing?

YOU: _____ (I / turn on)

2. Aufgabe (6 Punkte)

Passive voice: Fill in the gaps below by putting the verb in the passive!

Choose from these verbs: win, teach, forbid, change, find, keep, leave, allow, show, bring
accept ... and complete the hotel information below in the passive:

- 1 All major credit cards _____.
 - 2 Money can _____ at the bank on the ground floor.
 - 3 It _____ to take hotel towels to the beach, please use your own!
 - 4 Children under 14 _____ not _____ in hotel bars.
 - 5 Tea, coffee and other refreshments can _____ to your room at any time.
 - 6 Non-swimmers can _____ to swim in six easy lessons in the hotel rooms.
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3. Aufgabe (16 Punkte)

Put the verbs in the correct form using the Past Simple or the Present Perfect.

1. A: (you / play / already) _____ the new computer game?
 2. B: No, not yet. I only (buy) _____ it yesterday and I (have / not) _____ the time yet.
 3. A: (you / go) _____ to the cinema last night?
 4. B: Yes. I (be) _____ there with Sue and Louis. (you / be) _____ to the cinema recently?
 5. A: I last (go) _____ to the cinema two weeks ago.
 6. B: So you (see / not) _____ the new action film yet.
 7. A: No, unfortunately not. (you / enjoy) _____ it?
 8. B: Oh, I really (love) _____ it. But Sue (like / not) _____ it - too much action!
 9. A: But why (you / take) _____ her with you? She (tell) _____ me last week that she (hate) _____ action films.
 10. B: I think she has an eye on Louis. She (try) _____ to flirt with him all the time. So he (can / concentrate / not) _____ on the film.
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Punkte Teil 2

Note Teil 2

Name, Vorname:

Punkte Teil 1

Note Teil 1

Deutsche Übersetzung (Teil 1):