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| **Identification**  |
| **Name:**  | **Notebook reference:**  | **Date:**  |
| **Reaction description** Please describe the reaction (or provide a reaction scheme) |
|  |
| **Previous experience** If the **exact** same reaction on the **same or larger scale** has been approved, this reaction is also. If an incident has happened previously, consider it in a new risk analysis.  |
| **Experience:** [ ]  I have done this **exact** reaction before Notebook reference: **Scale:** [ ]  **Same / smaller** [ ]  **larger****Risks:** Are the risks the same? [ ] Yes [ ]  No |
| **Chemical Products** Identify the chemical products, their risks, and risk levels for all products used in the reaction |
| **Product No.****3****4****5** | **Product Name** | **Quantity****(g, mg, kg, ml, L)** | **Possible Risks** | **Risk level (0-5)** | **Have manipulated the product before** |
|  |  |  | **Toxic** | **Corrosive** | **Flammable** | **Oxidizer** | **Explosive** | **Enviro. Haz.** | **Comp. Gas** | **Other:\_\_\_\_\_\_\_\_\_\_\_­** |  |  |
| **1.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **2.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **3.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **4.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **5.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **6.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **7.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **8.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **9.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **10.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **11.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **12.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **13.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **14.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **15.** |  |  |[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]   |[ ]
| **Minimum risk levels**:  + 2,  + 1,  + 1,  + 2,  (b.p < 60°C) + 2,  (b.p > 60°C) + 1,  + 1,  + 5,  + 1,  + 1. **Other** (Highly Reactive, Pyrophoric, Carcinogen, etc.) = Risk +1  |
| **Total** (Max = No. of products x 5) Note: Products with No Risk are not counted in the Max value |  | **/**  |

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| **Reaction Conditions** |
| **Thermal Conditions** | **Risk level (0-5)** |
| [ ]  **Room Temperature** 20°C (Risk + 0)[ ]  **Heating** (Risk +1) [ ]  20 to 60°C (Risk + 2) [ ] 60 to 100°C (Risk + 3) [ ]  100 to 150°C (Risk + 4) [ ] 150 to 200°C and more (Risk + 5)[ ]  **Cooling** (Risk + 1) [ ]  20 to - 15°C (Risk + 2) [ ] -15 to -50°C (Risk + 3) [ ]  -50 to -100°C (Risk + 4) [ ] -100 to -150°C and more (Risk + 5) **Note:** Dangers of the solvent used for the cooling bath must be indicated in the Chemical Products  |  |
| **Atmospheric Conditions** | **Risk level (0-5)** |
| [ ] **Air / open flask** (Risk + 0)[ ] **Gas at 1atm** (Risk + 1) [ ]  1 to 2 atm (Risk + 2) [ ] 2 to 5 atm (Risk + 3) [ ]  Ar / N2 [ ]  5 to 7 atm (Risk + 4) [ ] 10 atm and more (Risk + 5) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Note:** Dangers of this gas must be indicated in the Chemical Products [ ] **Low vacuum**  (Risk level + 1) [ ]  **High vacuum** (Risk level + 3)  |  |
| **Quench** | **Risk level (0-2)** |
| **Do you need to quench your reaction?** [ ] Yes (Risk + 1) [ ] No If yes, is your quench exothermic? [ ] Yes (Risk +1) [ ] No |  |
| **Total** (Max = 0, 5 or 10 ) |  | **/**  |
| **Risk Evaluation** |  |  |
| **Total Risk Level** (risk levels exceeding 50% must be approved by supervisor) |  | **/** |
| **Personal Protection Equipment Required** |
|  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\lab coat.png |  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Safety glasses.gif |  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\gloves.jpeg | [ ]  Nitrile |  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\face-shield-symbol.jpg |  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\mask.png |  | C:\Users\Adam\AppData\Local\Microsoft\Windows\INetCache\Content.Word\gas mask.jpg |  |
| [ ]  | [ ]  | [ ]  | [ ]  Rubber | [ ]  | [ ]  | [ ]  | [ ]  Other : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  |  |  | [ ]  Latex |  |  |  |  |
| **Anticipated Work-up and Purification** |
| **Work-up Methods**[ ]  Water / brine wash Drying Agent \_\_\_\_\_\_\_\_\_\_\_ [ ]  Acid / base wash Concentration \_\_\_\_\_\_\_\_\_\_ Drying Agent \_\_\_\_\_\_\_\_\_\_\_[ ]  Filtration [ ]  Gravity [ ]  Suction [ ]  Evaporation[ ]  Other Specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **I have read the Standard Operating Procedure for all of the checked work-up methods?** [ ] Yes [ ]  No |
| **Purification Methods**[ ]  Column chromatography [ ]  Gravity [ ]  Under pressure [ ]  Recrystallization[ ]  Distillation [ ]  Simple [ ]  Reduced pressure [ ]  Sublimation [ ]  Simple [ ]  Reduced pressure[ ]  Other Specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  |
| **I have read the Standard Operating Procedure for all of the checked purification methods?** [ ] Yes [ ]  No |
| **Additional Comments (from the experimenter)**  |
|  |
| **Approval (if necessary)** |
| **Approval Options** | [ ]  Risk levels are well controlled, the reaction can be completed.[ ]  Risk levels are elevated, recommend completing full risk analysis.[ ]  Risk levels are too high, this reaction cannot be done. |
| **Additional Comments (from the supervisor)**  |
|  |
| **Supervisor’s signature:** |  |