

## Ale Be+De

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **30**
- SRM **7.4**

### Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **13 %/h**
- Boil size **16 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **10.3 liter(s)**
- Total mash volume **13.3 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **2 min**

### Mash step by step

- Heat up **10.3 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Keep mash **2 min** at **78C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **16 liter(s)** of wort

### Fermentables

| Type  | Name                        | Amount          | Yield | EBC |
|-------|-----------------------------|-----------------|-------|-----|
| Grain | Pilzneński                  | 2.5 kg (84.6%)  | 81 %  | 4   |
| Grain | carared                     | 0.2 kg (6.8%)   | 50 %  | --- |
| Grain | Abbey Castle                | 0.055 kg (1.9%) | 80 %  | 45  |
| Grain | Caramel/Crystal Malt - 120L | 0.2 kg (6.8%)   | 72 %  | 150 |

### Hops

| Use for | Name                 | Amount | Time   | Alpha acid |
|---------|----------------------|--------|--------|------------|
| Boil    | Magnum               | 10.4 g | 60 min | 11.5 %     |
| Boil    | Hallertau Mittelfruh | 20 g   | 15 min | 4.1 %      |
| Boil    | Hallertau Mittelfruh | 10 g   | 5 min  | 4.1 %      |