

## american bitter

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **28**
- SRM **10.9**
- Style **Special/Best/Premium Bitter**

### Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14.5 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **9 liter(s)**
- Total mash volume **12 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **9 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **78C**
- Sparge using **8.5 liter(s)** of **76C** water or to achieve **14.5 liter(s)** of wort

### Fermentables

| Type  | Name                             | Amount         | Yield | EBC |
|-------|----------------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt             | 2.5 kg (83.3%) | 80 %  | 5   |
| Grain | Słód Caramunich Typ II Weyermann | 0.5 kg (16.7%) | 73 %  | 120 |

### Hops

| Use for | Name    | Amount | Time   | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil    | Cascade | 5 g    | 60 min | 6 %        |
| Boil    | Cascade | 20 g   | 30 min | 6 %        |
| Boil    | Cascade | 20 g   | 5 min  | 6 %        |

### Yeasts

| Name                  | Type | Form | Amount | Laboratory |
|-----------------------|------|------|--------|------------|
| Danstar - Windsor Ale | Ale  | Dry  | 10 g   | Danstar    |