

Modern Bitter (12 BLG) #20

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **39**
- SRM **4.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **50 liter(s)**
- Trub loss **3 %**
- Size with trub loss **51.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **7 %/h**
- Boil size **60.5 liter(s)**

Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **5 liter(s) / kg**
- Mash size **55 liter(s)**
- Total mash volume **66 liter(s)**

Steps

- Temp **55 C**, Time **10 min**
- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **75.6 C**, Time **5 min**

Mash step by step

- Heat up **55 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **55C**
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **75.6C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **60.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pilsner malt | 5 kg (45.5%) | 82 % | 4 |
| Grain | Strzegom Wiedeński | 3 kg (27.3%) | 79 % | 10 |
| Grain | Weyermann - Carapils | 2 kg (18.2%) | 78 % | 4 |
| Grain | Viking Pale Ale malt | 1 kg (9.1%) | 80 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Marynka | 60 g | 60 min | 10 % |
| Boil | Cascade | 40 g | 30 min | 6 % |
| Boil | Cascade | 60 g | 5 min | 6 % |
| Aroma (end of boil) | Citra | 60 g | 0 min | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 22 g | Fermentis |