

American Pale Ale

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **36**
- SRM **3.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **10 %**
- Size with trub loss **11.5 liter(s)**
- Boil time **60 min**
- Evaporation rate **17 %/h**
- Boil size **14.6 liter(s)**

Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **7.7 liter(s)**
- Total mash volume **9.9 liter(s)**

Steps

- Temp **63 C**, Time **40 min**
- Temp **72 C**, Time **20 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **7.7 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **40 min** at **63C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9.1 liter(s)** of **76C** water or to achieve **14.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|---------------|-------|-----|
| Grain | Viking Pale Ale malt | 2.2 kg (100%) | 90 % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|----------|------------|
| Boil | Amarillo | 17 g | 60 min | 9.5 % |
| Aroma (end of boil) | Cascade | 16 g | 5 min | 5.8 % |
| Whirlpool | Amarillo | 15 g | 0 min | 9.5 % |
| Whirlpool | Cascade | 18 g | 0 min | 5.8 % |
| Dry Hop | Amarillo | 20 g | 2 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 15 ml | Fermentum Mobile |