

Kamil

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **37**
- SRM **7.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

Mash information

- Mash efficiency **64.5 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.2 liter(s)**

Steps

- Temp **67 C**, Time **60 min**

Mash step by step

- Heat up **20.4 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Sparge using **18.1 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 5.92 kg (87%) | 80 % | 5 |
| Grain | Viking Munich Malt | 0.59 kg (8.7%) | 78 % | 18 |
| Grain | Viking Carmel Malt 150 | 0.3 kg (4.3%) | 75 % | 150 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|---------|--------|------------|
| Boil | Centennial | 30.26 g | 30 min | 11.2 % |
| Boil | Cascade | 39.47 g | 15 min | 5.5 % |
| Aroma (end of boil) | Cascade | 39.47 g | 5 min | 5.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|---------|------------|
| Safale US-05 | Ale | Dry | 28.95 g | Fermentis |