

KassApa2

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **36**
- SRM **10.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **27 liter(s)**
- Trub loss **5 %**
- Size with trub loss **28.4 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **34.5 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.9 liter(s)**
- Total mash volume **30.5 liter(s)**

Steps

- Temp **64 C**, Time **45 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.9 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **45 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **19.2 liter(s)** of **76C** water or to achieve **34.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|------------------|--------|-----|
| Grain | Briess - Pale Ale Malt | 4.014 kg (52.6%) | 80 % | 7 |
| Grain | Weyermann - Carawheat | 0.4 kg (5.2%) | 77 % | 115 |
| Grain | Acid Malt | 0.07 kg (0.9%) | 58.7 % | 6 |
| Grain | Viking melanoidynowy | 0.306 kg (4%) | 75 % | 60 |
| Grain | Strzegom Wiedeński | 0.6 kg (7.9%) | 79 % | 10 |
| Grain | Rice, Flaked | 0.24 kg (3.1%) | 70 % | 2 |
| Grain | Monachijski | 1 kg (13.1%) | 80 % | 16 |
| Grain | Oats, Flaked | 0.5 kg (6.6%) | 80 % | 2 |
| Grain | Wheat, Flaked | 0.4 kg (5.2%) | 77 % | 4 |
| Grain | Strzegom Czekoladowy jasny | 0.1 kg (1.3%) | 68 % | 400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Jarrylo | 12 g | 45 min | 15 % |
| Boil | Chinook | 12 g | 45 min | 13 % |

| | | | | |
|---------------------|---------|------|----------|------|
| Boil | Cascade | 20 g | 45 min | 6 % |
| Aroma (end of boil) | Jarrylo | 8 g | 5 min | 15 % |
| Aroma (end of boil) | Chinook | 8 g | 5 min | 13 % |
| Aroma (end of boil) | Cascade | 20 g | 5 min | 6 % |
| Whirlpool | Cascade | 20 g | 0 min | 6 % |
| Dry Hop | Jarrylo | 10 g | 5 day(s) | 15 % |
| Dry Hop | Cascade | 20 g | 5 day(s) | 6 % |
| Dry Hop | Chinook | 10 g | 5 day(s) | 13 % |
| Dry Hop | Cascade | 20 g | 2 day(s) | 6 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 100 ml | Fermentis |