

APA v14 #118

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **38**
- SRM **4.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **8 %**
- Size with trub loss **18.7 liter(s)**
- Boil time **80 min**
- Evaporation rate **22 %/h**
- Boil size **24.3 liter(s)**

Mash information

- Mash efficiency **85.1 %**
- Liquor-to-grist ratio **3.94 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **18.8 liter(s)**

Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **20 min**
- Temp **77 C**, Time **7 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **71.8C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **13.1 liter(s)** of **76C** water or to achieve **24.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|--------|-----|
| Grain | Mep©Ale | 3.1 kg (81.6%) | 82.2 % | 4.8 |
| Grain | płatki owsiane | 0.4 kg (10.5%) | 83 % | 3 |
| Grain | Viking - pszeniczny | 0.1 kg (2.6%) | 83 % | 5 |
| Grain | Weyermann - abbey | 0.2 kg (5.3%) | 78 % | 45 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|----------|------------|
| Boil | Magnum | 13 g | 60 min | 11.5 % |
| Aroma (end of boil) | Zula | 40 g | 5 min | 9.7 % |
| Aroma (end of boil) | Oktawia | 40 g | 5 min | 7.8 % |
| Aroma (end of boil) | Izabela | 40 g | 1 min | 5.1 % |
| Dry Hop | Oktawia | 30 g | 2 day(s) | 7.8 % |
| Dry Hop | Zula | 30 g | 2 day(s) | 9.7 % |
| Dry Hop | Izabela | 30 g | 2 day(s) | 5.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|--------------------------------|-----|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 160 ml | White Labs |
|--------------------------------|-----|-------|--------|------------|

Extras

| Type | Name | Amount | Use for | Time |
|-------------|------------------------|--------|----------|--------|
| Water Agent | gips | 2.5 g | Mash | --- |
| Water Agent | kwask mlekowy 80% [ml] | 4.57 g | Mash | --- |
| Water Agent | chlerek wapnia [ml] | 0 g | Mash | --- |
| Water Agent | epsom | 0.5 g | Mash | --- |
| Water Agent | mech irlandzki | 3 g | Boil | 10 min |
| Water Agent | kwask askorbinowy | 3.5 g | Bottling | --- |