

APA v19 #125

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **37**
- SRM **5.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **18.5 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.4 liter(s)**
- Boil time **80 min**
- Evaporation rate **27.5 %/h**
- Boil size **27.1 liter(s)**

Mash information

- Mash efficiency **81.5 %**
- Liquor-to-grist ratio **3.65 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19.1 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 **72.3C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **27.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|----------------|-------|-----|
| Grain | Viking - pale ale | 3 kg (73.2%) | 80 % | 5.5 |
| Grain | bestmalz - pszeniczny | 0.3 kg (7.3%) | 85 % | 5 |
| Grain | Viking - wiedeński | 0.5 kg (12.2%) | 78 % | 9 |
| Grain | Viking - karmelowy 30 | 0.3 kg (7.3%) | 73 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-------------|---------|--------|------------|
| Boil | Warrior | 10 g | 60 min | 14.7 % |
| Aroma (end of boil) | Columbus | 49.15 g | 5 min | 12.6 % |
| Aroma (end of boil) | Mosaic | 20.31 g | 1 min | 12.5 % |
| Aroma (end of boil) | Książęcy | 22.6 g | 1 min | 7 % |
| Aroma (end of boil) | Amore Preta | 11.9 g | 1 min | 9 % |

Yeasts

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

| | | | | |
|--------------------------------|-----|-------|--------|------------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 150 ml | Fermentum Mobile |
| gęstwa 4-dniowa | | | | |

Extras

| Type | Name | Amount | Use for | Time |
|-----------------------------|------------------------|--------|----------|--------|
| Water Agent | Gips | 2.5 g | Mash | --- |
| Water Agent | kwask mlekowy 80% [ml] | 4.49 g | Mash | --- |
| Water Agent | chlerek wapnia [ml] | 0 g | Mash | --- |
| Water Agent | węglan wapnia/kreda | 0 g | Mash | --- |
| Water Agent | sól epsom | 0.5 g | Mash | --- |
| Fining | irish moss | 3 g | Boil | 10 min |
| zastanowić się czy dodawać? | | | | |
| Water Agent | kwask askorbinowy | 3 g | Bottling | --- |