

APA v18 #124

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **44**
- SRM **4.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **17.6 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.5 liter(s)**
- Boil time **80 min**
- Evaporation rate **27.5 %/h**
- Boil size **25.6 liter(s)**

Mash information

- Mash efficiency **79.5 %**
- Liquor-to-grist ratio **3.77 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **19 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 **72.1C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **20 min** at **72C**
- Keep mash **7 min** at **77C**
- Sparge using **14.6 liter(s)** of **76C** water or to achieve **25.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------|-----------------|-------|-----|
| Grain | pilzneński - viking | 0.392 kg (9.8%) | 81 % | 4 |
| Grain | pale ale - viking | 2.9 kg (72.6%) | 80 % | 5.5 |
| Grain | płatki owsiane | 0.1 kg (2.5%) | 83 % | 3 |
| Grain | pszeniczny - bestmalz | 0.3 kg (7.5%) | 83 % | 5 |
| Grain | karmelowy 30 - viking | 0.3 kg (7.5%) | 75 % | 30 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------|--------|--------|------------|
| Boil | Warrior | 10 g | 60 min | 14.7 % |
| Aroma (end of boil) | Strata | 50 g | 5 min | 15.5 % |
| Aroma (end of boil) | Mosaic | 20 g | 1 min | 12.5 % |
| Aroma (end of boil) | Galaxy | 30 g | 1 min | 14.5 % |

Yeasts

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

| | | | | |
|--------------------------------|-----|-------|--------|------------|
| WLP090 - San Diego Super Yeast | Ale | Slant | 190 ml | White Labs |
|--------------------------------|-----|-------|--------|------------|

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 | epsom | 0.5 g | Mash | --- |
| Water Agent | mech irlandzki | 3 g | Boil | 10 min |
| Water Agent | kwask askorbinowy | 3 g | Bottling | --- |