

WHITE APA

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **39**
- SRM **4.7**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **2 %**
- Size with trub loss **26 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

Steps

- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **19.5 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **50 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **17 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|---------------|-------|-----|
| Grain | Pilzneński | 4 kg (61.5%) | 82 % | 4 |
| Grain | Pszeniczny | 2 kg (30.8%) | 85 % | 4 |
| Grain | Carahell | 0.5 kg (7.7%) | 74 % | 26 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Chinook | 15 g | 60 min | 13 % |
| Boil | Chinook | 15 g | 10 min | 13 % |
| Boil | Cascade | 30 g | 10 min | 6 % |
| Boil | Amarillo | 30 g | 10 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safbrew S-33 | Ale | Dry | 11.5 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|-------|----------------------------|------|------|--------|
| Spice | Skórka słodkiej pomarańczy | 20 g | Boil | 10 min |
| Spice | Skórka curacao | 20 g | Boil | 10 min |
| Spice | Kolendra | 10 g | Boil | 10 min |