

ŻLAPA v2

- Gravity **10.5 BLG**
- ABV **4.2 %**
- IBU **41**
- SRM **5.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **8 %/h**
- Boil size **25.9 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **13.7 liter(s)**
- Total mash volume **17.6 liter(s)**

Steps

- Temp **71 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.7 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **60 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **16.1 liter(s)** of **76C** water or to achieve **25.9 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-------------------------------|----------------|--------|-----|
| Grain | Pale Ale optima | 1.5 kg (36.6%) | 81.6 % | 7 |
| Grain | Żytmi | 1 kg (24.4%) | 85 % | 8 |
| Grain | monachijski Typ I Viking Malt | 1 kg (24.4%) | 78 % | 18 |
| Grain | Słód Carahell (R) | 0.2 kg (4.9%) | 75 % | 25 |
| Grain | Płatki owsiane | 0.2 kg (4.9%) | 85 % | 3 |
| Sugar | cukier | 0.2 kg (4.9%) | 100 % | 2 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------|--------|--------|------------|
| Boil | Amarillo | 20 g | 60 min | 9.5 % |
| Boil | Cascade | 25 g | 5 min | 9.7 % |
| Boil | Chinook PL | 25 g | 5 min | 8.6 % |
| Boil | Cascade PL | 25 g | 5 min | 5.5 % |
| Boil | Citra | 20 g | 5 min | 12 % |
| Whirlpool | Chinook PL | 25 g | 0 min | 8.6 % |
| Whirlpool | Cascade PL | 25 g | 0 min | 5.5 % |
| Whirlpool | Citra | 25 g | 0 min | 12 % |

| | | | | |
|-----------|------------|------|----------|-------|
| Whirlpool | Cascade | 25 g | 0 min | 9.7 % |
| Whirlpool | Amarillo | 25 g | 0 min | 9.5 % |
| Dry Hop | Chinook PL | 25 g | 4 day(s) | 8.6 % |
| Dry Hop | Cascade PL | 25 g | 4 day(s) | 5.5 % |
| Dry Hop | Citra | 30 g | 4 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------|------|--------|---------|------------|
| HotHead | Ale | Liquid | 1000 ml | omega |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-------------|--------|---------|--------|
| Fining | Whirlfloc T | 1 g | Boil | 10 min |