

# IPA

- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **64**
- SRM **4.5**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **11 liter(s)**
- Trub loss **5 %**
- Size with trub loss **11.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **14 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **9.6 liter(s)**
- Total mash volume **12.4 liter(s)**

## Fermentables

| Type  | Name                 | Amount         | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 2 kg (72.7%)   | 80 %  | 5   |
| Grain | Pszeniczny           | 0.25 kg (9.1%) | 85 %  | 4   |
| Grain | Weyermann - Carapils | 0.25 kg (9.1%) | 78 %  | 4   |
| Grain | Monachijski          | 0.25 kg (9.1%) | 80 %  | 16  |

## Hops

| Use for             | Name       | Amount | Time     | Alpha acid |
|---------------------|------------|--------|----------|------------|
| Boil                | Citra      | 10 g   | 10 min   | 12 %       |
| Boil                | Amarillo   | 10 g   | 10 min   | 10.5 %     |
| Boil                | Warrior    | 10 g   | 60 min   | 15.5 %     |
| Aroma (end of boil) | Citra      | 15 g   | 0 min    | 12 %       |
| Aroma (end of boil) | Centennial | 15 g   | 0 min    | 10.5 %     |
| Whirlpool           | Centennial | 10 g   | 30 min   | 10.5 %     |
| Whirlpool           | Citra      | 10 g   | 30 min   | 12 %       |
| Dry Hop             | Citra      | 15 g   | 2 day(s) | 12 %       |
| Dry Hop             | Centennial | 15 g   | 2 day(s) | 10.5 %     |

## Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 10 g   | Fermentis  |

## Extras

| Type  | Name                        | Amount | Use for | Time  |
|-------|-----------------------------|--------|---------|-------|
| Spice | kwas mlekowy 5ml            | 1 g    | Mash    | 1 min |
| Spice | chlerek wapnia 0,5 łyżeczki | 1 g    | Mash    | 1 min |

|       |                            |     |      |       |
|-------|----------------------------|-----|------|-------|
| Spice | sól gorzka 1,5<br>łyżeczki | 1 g | Mash | 1 min |
|-------|----------------------------|-----|------|-------|

### Notes

- Zbyt gorzkie, mniej chmielu na 60 min ?, 21l wody ---> 8 l wystadzenie 13 zacieranie  
*Feb 21, 2018, 9:41 PM*