

## #45 Walter White

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- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **48**
- SRM **4.3**
- Style **White IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

### Steps

- Temp **64 C**, Time **40 min**
- Temp **72 C**, Time **20 min**

### Mash step by step

- Heat up **18 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **40 min** at **64C**
- Keep mash **20 min** at **72C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name       | Amount         | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 5.2 kg (86.7%) | 81 %  | 4   |
| Grain | Pszeniczny | 0.4 kg (6.7%)  | 85 %  | 4   |
| Grain | Żytni      | 0.4 kg (6.7%)  | 85 %  | 8   |

### Hops

| Use for             | Name            | Amount | Time   | Alpha acid |
|---------------------|-----------------|--------|--------|------------|
| Boil                | Cascade         | 40 g   | 37 min | 8.7 %      |
| Aroma (end of boil) | Equinox         | 24 g   | 5 min  | 13.1 %     |
| Aroma (end of boil) | Hallertau Blanc | 28 g   | 5 min  | 11 %       |
| Aroma (end of boil) | Sorachi Ace     | 24 g   | 5 min  | 13 %       |
| Whirlpool           | Equinox         | 20 g   | 0 min  | 13.1 %     |
| Whirlpool           | Hallertau Blanc | 28 g   | 0 min  | 11 %       |
| Whirlpool           | Sorachi Ace     | 20 g   | 0 min  | 10 %       |

### Yeasts

| Name  | Type | Form  | Amount | Laboratory |
|-------|------|-------|--------|------------|
| US 05 | Ale  | Slant | 10 ml  | ---        |

### Extras

| Type | Name      | Amount | Use for   | Time      |
|------|-----------|--------|-----------|-----------|
| Herb | Sencha EG | 43.2 g | Secondary | 48 day(s) |