

## #4 APA

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **44**
- SRM **7.7**
- Style **American Pale Ale**

### 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 **72 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

### Steps

- Temp **67 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **0 min**

### Mash step by step

- Heat up **16.8 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **72C**
- Keep mash **0 min** at **78C**
- Sparge using **14.1 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

| Type  | Name                   | Amount         | Yield | EBC |
|-------|------------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński    | 2.5 kg (44.6%) | 80 %  | 4   |
| Grain | Strzegom Pale Ale      | 2.5 kg (44.6%) | 79 %  | 6   |
| Grain | Strzegom Pszeniczny    | 0.3 kg (5.4%)  | 81 %  | 6   |
| Grain | Strzegom Karmel<br>150 | 0.3 kg (5.4%)  | 75 %  | 150 |

### Hops

| Use for   | Name     | Amount | Time   | Alpha acid |
|-----------|----------|--------|--------|------------|
| Boil      | Chinook  | 10 g   | 60 min | 13.2 %     |
| Boil      | Amarillo | 15 g   | 20 min | 7.5 %      |
| Boil      | Cascade  | 15 g   | 20 min | 7.1 %      |
| Boil      | Amarillo | 15 g   | 7 min  | 7.5 %      |
| Boil      | Cascade  | 15 g   | 7 min  | 7.1 %      |
| Whirlpool | Amarillo | 20 g   | 20 min | 7.5 %      |
| Whirlpool | Cascade  | 20 g   | 20 min | 7.1 %      |

### Yeasts

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

|                      |     |        |        |                  |
|----------------------|-----|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 125 ml | Fermentum Mobile |
|----------------------|-----|--------|--------|------------------|

### Extras

| Type   | Name           | Amount | Use for | Time   |
|--------|----------------|--------|---------|--------|
| Fining | mech irlandzki | 5 g    | Boil    | 10 min |

### Notes

- 13Blg i 24L do fermentacji  
2 tygodnie burzliwej i tydzień cichej - 2Blg  
*Jan 2, 2018, 11:24 PM*