

ZestAPA

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **43**
- SRM **5.4**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18 liter(s)**

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 3.5 kg (87.5%) | 80 % | 5 |
| Grain | Carahell | 0.5 kg (12.5%) | 77 % | 26 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|-----------|------------|
| Boil | lunga | 5 g | 60 min | 11 % |
| Boil | lunga | 5 g | 50 min | 11 % |
| Boil | lunga | 5 g | 40 min | 11 % |
| Aroma (end of boil) | Citra | 15 g | 10 min | 12 % |
| Aroma (end of boil) | Cascade | 15 g | 10 min | 6 % |
| Aroma (end of boil) | Amarillo | 15 g | 10 min | 9.5 % |
| Dry Hop | Citra | 35 g | 14 day(s) | 12 % |
| Dry Hop | Cascade | 35 g | 14 day(s) | 6 % |
| Dry Hop | Amarillo | 35 g | 14 day(s) | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 12 g | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------|--------|-----------|-----------|
| Flavor | zest cytryny | 100 g | Secondary | 14 day(s) |
| Flavor | zest grejfruta | 100 g | Secondary | 14 day(s) |
| Flavor | zest pomarańczy | 100 g | Secondary | 14 day(s) |
| Flavor | zest mandarynki | 100 g | Secondary | 14 day(s) |