

CHAMPAGNE DOSAGE TRIAL (PART 2) IN ITS OWN SWEET TIME

Tom Stevenson introduces the second and final tasting in *WFW*'s unique six-year project to discover how the same Champagne evolves with different levels of *dosage*, shared with Essi Avellan MW and Simon Field MW

As Champagne's harvests have become warmer and earlier (see *À la Volée* in *WFW* 62), so the average level of a brut *dosage* has dropped and the incidence of premature oxidation has increased. Is there a connection?

This was the question at the heart of our *dosage* trial when it began in 2012, because if one attribute has distinguished Champagne from other sparkling wines over the years, it has been its exceptional longevity. With no scientific research on the effect of different levels of *dosage*, and premature oxidation a talking point among consulting enologists in the region, I feared that Champagne's knee-jerk reaction to climate change might see the world's greatest sparkling wine sleepwalking into obscurity.

Low and no dosage

As a brief recap, Sweet Truth? (see *WFW* 53) was the first of two tastings of exactly the same Champagne (same wines, same disgorgement, and same range of *dosage*) to determine whether Champagnes with less *dosage* age as well as those with more *dosage*. The idea that they might not—that low-*dosage* and, particularly, no-*dosage* Champagnes could evolve less gracefully than classic brut *dosage* Champagnes—does not imply that such wines cannot be wonderfully fresh and exhilarating to drink when initially released. It just raises a question mark over their longevity.

Before embarking on this project, I had spoken to the renowned Champagne chemist Bertrand Robillard, who confirmed that he had similar fears. He

went on to qualify his opinion, however, pointing out that “many producers of low-*dosage* and no-*dosage* Champagnes do not add SO₂ at the time of disgorgement, leaving the wines prone to oxidation.” He also agreed that sugar is a good compound for screening certain aromas. As long ago as 1970, Hans Gerhard Maier established that sugar suppresses acetaldehyde by increasing its vapor pressure. This is not dissimilar (in its effect) to SO₂, which does not stop oxidation but binds with acetaldehyde to suppress its Sherry-like aroma. Additionally there is the “reservoir” effect, whereby SO₂ binds only loosely to sugar, from which it can disassociate to bind with any slow-building acetaldehyde.

This demonstrates that there are genuine scientific reasons why the level of *dosage* does have an effect on the post-disgorgement development of Champagne, but there has been no research on the subject, thus no scientific data to quantify the effect, which might help guide producers as they continue to react to climate change by lowering the level of *dosage*. This is why *WFW* felt compelled to conduct not a scientific study per se but the world's first multi-producer, multi-*dosage* study—not to prove any particular point, but to see if there is any discernible difference in the post-disgorgement development of Champagne that varies according to the levels of *dosage*.

Project structure

With the benefit of hindsight, it is clear that I made three errors of omission when setting up this *dosage* trial:

insisting on magnums only, not including zero-SO₂ at the time of disgorgement, and failing to insist on Diam Mytik for consistent oxygen-transfer rate.

Parameters and logistics

One question asked after the three-year results were announced was why no growers were included. Their participation would have been most welcome, and hundreds of growers were invited to take part, but none accepted the challenge, not even the friendliest and most helpful. This was not surprising when the cost of participation for each producer was 32 magnums and six years' cellar space. Smaller producers simply do not have the budget.

The 11 producers who did very generously accept—Deutz, Drappier, Duval-Leroy, Moët & Chandon, Mumm, Pol Roger, Pommery, Roederer, Ruinart, Taittinger, and Veuve Clicquot—were required to disgorge 16 magnums of 2004 and 16 magnums of 2002 in the same week of April 2012 and *dosage* four magnums of each with 0g, 3g, 6g, and 9g of sugar. This allowed for two tastings—the first in 2015, the second in 2018—and a back-up for each wine at both tastings.

After trying unsuccessfully to get all the producers to agree one level of SO₂, the majority chose to add 20mg/l at disgorgement, while most of the rest chose 40mg, and one 30mg. That was a commitment of 32 magnums and six years' cellar space to this project. One producer, Mumm, chose to add both 20mg and 40mg of SO₂, thus contributing 64 magnums to the project! They agreed to store the wines under

ideal conditions in their own cellars until 2015, when they shipped half the samples for the first tasting, and 2018, when they shipped half the samples for the second tasting. By opting for magnums only, the idea was to give low- and no-*dosage* versions the benefit of the slowest development and freshest outcome. Unfortunately, it worked only too well. In her summary, Essi concluded that “we should have conducted the experiment in 75cl bottles rather than magnums,” and I tend to agree, but it would have been even better if we had used bottles and magnums.

Order of play

We tasted Part 2 in exactly the same way as we had tasted Part 1 three years earlier: in random brand order, unaware of which brand was which, but knowing that we were always tasting the 2004s first, the 2002s second, and within these vintages by ascending order of sweetness (0g, 3g, 6g, and 9g). The only difference was that we had to use *WFW*'s old 20-point scale and then convert each score to the 100-point scale. This was because, for Part 1, we had scored under the old 20-point scale, but by the time it was published, *WFW* had moved onto the 100-point and our original scores had to be converted. To make any sense when comparing the results for both tastings, we had to go through the same convoluted process. This is why the scores for both tastings seem overly generous. I cannot speak for Simon, but for Essi and me, a score of 17 is nowhere near the quality of a 90-point wine,

although we both understand that a perfect transition from 20 to 100 is not possible.

Tasting results

This tasting took place at Nyetimber's pressing facility, thanks to Cherie Spriggs and Brad Greatrix, who very generously analyzed all the wines for *WFW*. If we average the score per *dosage* category for the panel and each taster (*below*), we can see that there is a clear preference for 9g (mostly) and 6g, just as there is the least preference for 0g (mostly) and 3g.

But the objective of this exercise was not to seek out a preference for a particular level of *dosage*; it was to measure any discernible effect that sugar might have on the evolution of Champagne, and the only way to accomplish that, of course, is to compare the results of Part 2 with those of Part 1 (*below*) and see if there was a noticeable or progressive difference in the scores for each *dosage* level. A deterioration would be indicated by negative values, but the averaged data yielded only one negative value, and even that was not significant. If anything, the lowest *dosage* category seemed to fare best of all.

However, from the complete list of scores for both Part 1 and Part 2 (*overleaf*), it can be seen that there are many individual wines whose quality had declined significantly (highlighted in red). Relatively few of these filtered through to the average panel score. For example, one or more tasters judged 19 out of 24 0g wines lower than in the Part 1 tasting three years ago, yet only three of these averaged

AVERAGE AND RANGE OF SCORES

	Average	Range
Tasting	92	70-100
EA	93	75-100
SF	90	83-95
TS	92	70-99

THE PANEL'S TOP WINES

Duval-Leroy Femme de Champagne 2002 Brut; dosage 6g (SO ₂ 20mg) 98
Duval-Leroy Femme de Champagne 2002 Brut; dosage 3g (SO ₂ 20mg) 97
Mumm 2004 Brut; dosage 9g (SO ₂ 20mg) 96
Louis Roederer 2004 Brut; dosage 9g (SO ₂ 20mg) 96
Louis Roederer 2002 Brut; dosage 9g (SO ₂ 20mg) 96
Taittinger 2002 Brut; dosage 9g (SO ₂ 30mg) 96
Deutz 2004 Brut; dosage 3g (SO ₂ 20mg) 95
Duval-Leroy Femme de Champagne 2004 Brut; dosage 0g (SO ₂ 20mg) 95
Duval-Leroy Femme de Champagne 2004 Brut; dosage 3g (SO ₂ 20mg) 95
Duval-Leroy Femme de Champagne 2004 Brut; dosage 9g (SO ₂ 20mg) 95
Duval-Leroy Femme de Champagne 2002 Brut; dosage 0g (SO ₂ 20mg) 95
Mumm 2004 Brut; dosage 3g (SO ₂ 20mg) 95
Mumm 2004 Brut; dosage 6g (SO ₂ 20mg) 95
Mumm 2004 Brut; dosage 9g (SO ₂ 40mg) 95
Louis Roederer 2004 Brut; dosage 3g (SO ₂ 20mg) 95
Louis Roederer 2004 Brut; dosage 6g (SO ₂ 20mg) 95
Ruinart Dom Ruinart 2002 Brut; dosage 9g (SO ₂ 40mg) 95
Taittinger 2002 Brut; dosage 6g (SO ₂ 30mg) 95

TOM STEVENSON'S TOP WINES

Duval-Leroy Femme de Champagne 2002 Brut; dosage 6g (SO ₂ 20mg) 99
Taittinger 2002 Brut; dosage 6g (SO ₂ 30mg) 99
Taittinger 2002 Brut; dosage 9g (SO ₂ 30mg) 99
Duval-Leroy Femme de Champagne 2004 Brut; dosage 3g (SO ₂ 20mg) 98
Duval-Leroy Femme de Champagne 2004 Brut; dosage 6g (SO ₂ 20mg) 98
Mumm 2004 Brut; dosage 6g (SO ₂ 20mg) 98
Mumm 2004 Brut; dosage 9g (SO ₂ 20mg) 98
Pommery 2002 Brut; dosage 3g (SO ₂ 40mg) 98
Pommery 2002 Brut; dosage 6g (SO ₂ 40mg) 98
Taittinger 2004 Brut; dosage 3g (SO ₂ 30mg) 98
Taittinger 2002 Brut; dosage 3g (SO ₂ 30mg) 98

Preferred dosage category

	Part 1 (0g)	Part 1 (3g)	Part 1 (6g)	Part 1 (9g)	Part 2 (0g)	Part 2 (3g)	Part 2 (6g)	Part 2 (9g)
Panel average score	88	89	91	91	91*	91	92	93
TS average score	87	88	90	91	90	91	94	94
EA average score	91	93	93	94	92*	92	94	94
SF average score	88	88*	90	89	90	90*	90	91

* Lower accumulatively

Preferred dosage category, Part 1 v Part 2

	Part 1 (0g)	Part 2 (0g)	Part 1 & 2 (0g)	Part 1 (3g)	Part 2 (3g)	Part 1 & 2 (3g)	Part 1 (6g)	Part 2 (6g)	Part 1 & 2 (6g)	Part 1 (9g)	Part 2 (9g)	Part 1 & 2 (9g)
Panel average score	88	91	3	89	91	2	91	92	1	91	93	2
TS average score	87	90	3	88	91	3	90	94	4	91	94	2
EA average score	91	92	1	93	92	-1	93	94	1	94	94	0
SF average score	88	90	2	88	90	2	90	90	0	89	91	2

Champagne dosage trial Part 1 v Part 2																									
Wine	Panel score Part 1	Panel score Part 2	Panel change	TS score Part 1	TS score Part 2	TS change	EA score Part 1	EA score Part 2	EA change	SF score Part 1	SF score Part 2	SF change	Dosage	RS g/l	SO ₂ at dosage	Free SO ₂ ppm	Total SO ₂ ppm	pH	TA g/l	Acetaldehyde mg/l					
Deutz Cuvée William Deutz 2002 Brut 12% dosage 0g (SO ₂ 20mg)	89	94	5	86	96	10	92	98	6	89	87	-2	0	1.3	20	1	55	3.07	6.4	44					
Drappier 2002 Brut 12% dosage 0g (SO ₂ 20mg)	88	90	2	84	88	4	94	89	-5	88	92	4	0	0.9	20	1	48	3.00	6.8	32					
Drappier 2004 Brut 12% dosage 0g (SO ₂ 20mg)	89	88	-1	84	84	0	94	87	-7	90	92	2	0	1.9	20	2	44	3.10	6.2	32					
Duval Leroy Femme de 2002 Brut 12% dosage 0g (SO ₂ 20mg)	84	95	11	84	94	10	86	96	10	83	94	11	0	0.9	20	1	34	3.11	6.8	34					
Duval Leroy Femme de 2004 Brut 12% dosage 0g (SO ₂ 20mg)	89	95	6	92	96	4	87	96	9	88	92	4	0	0.7	20	1	38	3.06	6.8	38					
Moët & Chandon 2002 Brut 12.5% dosage 0g (SO ₂ 40mg)	90	89	-1	90	86	-4	94	89	-5	89	92	3	0	1.4	40	4	61	3.07	6.4	30					
Moët & Chandon 2004 Brut 12.5% dosage 0g (SO ₂ 40mg)	90	88	-2	88	86	-2	94	89	-5	89	89	0	0	1.4	40	3	56	3.06	6.3	30					
Mumm 2002 Brut 12% dosage 0g (SO ₂ 20mg)	86	92	6	83	94	11	86	94	8	90	89	-1	0	1.9	20	1	41	3.08	6.0	38					
Mumm 2004 Brut 12% dosage 0g (SO ₂ 20mg)	89	92	3	85	94	9	94	90	-4	90	90	0	0	1.7	40	2	63	3.09	6.1	43					
Mumm 2004 Brut 12% dosage 0g (SO ₂ 20mg)	86	91	5	88	90	2	85	98	13	86	86	0	0	0.9	20	2	40	3.07	6.7	31					
Mumm 2004 Brut 12% dosage 0g (SO ₂ 20mg)	90	90	0	88	86	-2	98	89	-9	89	94	5	0	0.9	40	2	51	3.07	6.1	35					
Pol Roger 2002 Extra Cuvée de Reserve Brut 12.5% dosage 0g (SO ₂ 20mg)	87	87	0	84	84	0	87	89	2	88	87	-1	0	1.5	20	2	32	3.00	7.0	30					
Pol Roger 2004 Extra Cuvée de Reserve Brut 12.5% dosage 0g (SO ₂ 20mg)	87	88	1	85	86	1	87	86	-1	89	92	3	0	1.5	20	1	38	2.99	7.2	36					
Pommery 2002 Brut 12.5% dosage 0g (SO ₂ 40mg)	90	93	3	90	96	6	94	90	-4	88	92	4	0	1.2	40	2	44	3.06	5.9	30					
Pommery 2004 Brut 12.5% dosage 0g (SO ₂ 40mg)	88	89	1	86	86	0	94	91	-3	86	90	4	0	0.7	40	5	44	3.02	6.3	24					
Louis Roederer Brut 12% 2002 dosage 0g (SO ₂ 20mg)	90	91	1	84	92	8	98	95	-3	94	87	-7	0	1.8	20	2	59	2.93	8.3	44					
Louis Roederer Brut 12% 2004 dosage 0g (SO ₂ 20mg)	89	93	4	86	94	8	98	95	-3	87	91	4	0	1.3	20	2	55	2.90	8.4	39					
Ruinart Dom Ruinart 2002 Brut 12.5% dosage 0g (SO ₂ 40mg)	89	93	4	84	90	6	94	96	2	92	92	0	0	0.9	40	5	71	3.09	6.4	38					
Ruinart Dom Ruinart 2004 Brut 12.5% dosage 0g (SO ₂ 40mg)	89	90	1	85	86	1	94	94	0	89	90	1	0	0.6	40	4	62	3.10	6.1	33					
Taittinger 2002 Brut 12% dosage 0g (SO ₂ 30mg)	92	91	-1	98	96	-2	90	90	0	89	88	-1	0	2.5	30	1	61	3.00	6.8	50					
Taittinger 2004 Brut 12% dosage 0g (SO ₂ 30mg)	90	90	0	90	84	-6	90	87	-3	89	91	2	0	1.8	30	2	63	3.02	6.8	47					
Veuve Clicquot 2002 Brut 12% dosage 0g (SO ₂ 20mg)	85	86	1	85	84	-1	87	86	-1	84	88	4	0	1.4	20	1	38	2.97	6.6	34					
Veuve Clicquot 2004 Brut 12% dosage 0g (SO ₂ 20mg)	87	87	0	88	84	-4	86	86	0	87	92	5	0	2.2	20	1	41	2.94	7.0	37					
Average	88	91	3	87	90	3	91	92	1	88	90	2	0	1.3	28	2	49	3.03	6.7	36					
Deutz 2004 Brut 12% dosage 3g (SO ₂ 20mg)	89	95	6	88	96	8	90	98	8	90	92	2	3	5.0	20	1	49	2.93	7.7	39					
Deutz Cuvée William Deutz 2002 Brut 12% dosage 3g (SO ₂ 20mg)	89	93	4	86	92	6	94	99	5	89	88	-1	3	4.8	20	2	55	3.07	6.4	41					
Drappier 2002 Brut 12% dosage 3g (SO ₂ 20mg)	90	91	1	92	90	-2	92	92	0	87	90	3	3	4.1	20	2	45	3.00	6.8	35					
Drappier 2004 Brut 12% dosage 3g (SO ₂ 20mg)	87	87	0	84	86	2	90	88	-2	88	88	0	3	5.1	20	2	39	3.10	6.2	31					
Duval Leroy Femme de 2002 Brut 12% dosage 3g (SO ₂ 20mg)	86	97	11	84	96	12	88	98	10	85	96	11	3	4.1	20	2	32	3.11	6.8	33					
Duval Leroy Femme de 2004 Brut 12% dosage 3g (SO ₂ 20mg)	89	95	6	90	98	8	89	96	7	87	90	3	3	3.9	20	1	35	3.06	6.8	33					
Moët & Chandon 2002 Brut 12.5% dosage 3g (SO ₂ 40mg)	92	92	0	94	92	-2	94	90	-4	88	94	6	3	3.9	40	6	61	3.07	6.4	29					
Moët & Chandon 2004 Brut 12.5% dosage 3g (SO ₂ 40mg)	90	90	0	88	92	4	96	90	-6	90	87	-3	3	4.6	40	5	58	3.06	6.3	29					
Mumm 2002 Brut 12% dosage 3g (SO ₂ 20mg)	87	93	6	84	92	8	88	96	8	90	91	1	3	5.0	20	2	43	3.08	6.0	38					
Mumm 2002 Brut 12% dosage 3g (SO ₂ 40mg)	89	92	3	86	92	6	96	92	-4	89	91	2	3	4.8	40	2	61	3.09	6.1	41					
Mumm 2004 Brut 12% dosage 3g (SO ₂ 20mg)	88	95	7	89	96	7	87	98	11	88	90	2	3	4.1	20	3	44	3.07	6.7	32					
Mumm 2004 Brut 12% dosage 3g (SO ₂ 40mg)	92	93	1	88	94	6	98	90	-8	90	94	4	3	4.1	40	2	54	3.07	6.1	36					
Pol Roger 2002 Extra Cuvée de Reserve Brut 12.5% dosage 3g (SO ₂ 20mg)	89	76	-13	92	70	-22	89	75	-14	87	83	-4	3	4.3	20	1	22	3.00	7.0	29					
Pol Roger 2004 Extra Cuvée de Reserve Brut 12.5% dosage 3g (SO ₂ 20mg)	87	87	0	85	88	3	88	87	-1	87	87	0	3	4.5	20	1	27	2.99	7.2	32					
Pommery 2002 Brut 12.5% dosage 3g (SO ₂ 40mg)	94	94	0	94	98	4	98	94	-4	89	91	2	3	5.0	40	2	48	3.06	5.9	32					
Pommery 2004 Brut 12.5% dosage 3g (SO ₂ 40mg)	88	86	-2	87	84	-3	96	90	-6	85	85	0	3	3.6	40	3	42	3.02	6.3	25					
Louis Roederer Brut 12% 2002 dosage 3g (SO ₂ 20mg)	90	94	4	86	96	10	98	97	-1	92	90	2	3	5.0	20	2	61	2.93	8.3	44					
Louis Roederer Brut 12% 2004 dosage 3g (SO ₂ 20mg)	90	95	5	86	96	10	99	97	-2	89	91	2	3	4.2	20	2	56	2.90	8.4	39					
Ruinart Dom Ruinart 2002 Brut 12.5% dosage 3g (SO ₂ 40mg)	89	94	5	84	92	8	96	97	1	89	93	4	3	3.9	40	6	74	3.09	6.4	38					
Ruinart Dom Ruinart 2004 Brut 12.5% dosage 3g (SO ₂ 40mg)	89	91	2	85	90	5	96	94	-2	89	89	0	3	3.6	40	6	65	3.10	6.1	34					
Taittinger 2002 Brut 12% dosage 3g (SO ₂ 30mg)	90	94	4	90	98	8	94	92	-2	89	91	2	3	5.6	30	1	59	3.00	6.8	50					
Taittinger 2004 Brut 12% dosage 3g (SO ₂ 30mg)	90	90	0	90	88	8	92	88	-4	88	85	-3	3	4.9	30	1	62	3.02	6.8	46					
Veuve Clicquot 2002 Brut 12% dosage 3g (SO ₂ 20mg)	86	88	2	84	84	0	89	88	-1	85	91	6	3	3.7	20	2	37	2.97	6.6	32					
Veuve Clicquot 2004 Brut 12% dosage 3g (SO ₂ 20mg)	88	87	-1	90	84	-6	88	86	-2	85	91	6	3	3.1	20	2	46	2.94	7.0	36					
Average	89	91	2	88	91	3	93	92	-1	88	90	2	3	4.4	28	2	49	3.03	6.7	36					
Deutz 2004 Brut 12% dosage 6g (SO ₂ 20mg)	89	92	3	87	94	7	92	96	4	88	87	-1	6	8.2	20	2	42	2.93	7.7	37					
Deutz Cuvée William Deutz 2002 Brut 12% dosage 6g (SO ₂ 20mg)	92	93	1	96	94	-2	94	99	5	87	86	-1	6	8.7	20	1	50	3.07	6.4	44					
Drappier 2002 Brut 12% dosage 6g (SO ₂ 20mg)	90	91	1	90	90	0	90	93	3	92	91	-1	6	7.8	20	2	48	3.00	6.8	35					
Drappier 2004 Brut 12% dosage 6g (SO ₂ 20mg)	92	91	-1	94	92	-2	89	90	1	92	90	-2	6	8.3	20	2	50	3.10	6.2	32					
Duval Leroy Femme de 2002 Brut 12% dosage 6g (SO ₂ 20mg)	88	98	10	89	99	10	87	99	12	89	95	6	6	7.5	20	2	35	3.11	6.8	37					
Duval Leroy Femme de 2004 Brut 12% dosage 6g (SO ₂ 20mg)	89	93	4	89	98	9	88	93	5	89	89	0	6	7.4	20	2	36	3.06	6.8	33					
Moët & Chandon 2002 Brut 12.5% dosage 6g (SO ₂ 40mg)	94	91	-3	92	92	0	96	88	-8	92	92	0	6	6.3	40	5	57	3.07	6.4	30					
Moët & Chandon 2004 Brut 12.5% dosage 6g (SO ₂ 40mg)	90	90	0	89	92	3	98	91	-7	87	88	1	6	7.2	40	5	57	3.06	6.3	30					
Mumm 2002 Brut 12% dosage 6g (SO ₂ 20mg)	87	92	5	83	88	5	89	96	7	88	92	4	6	8.0	20	2	44	3.08	6.0	38					
Mumm 2002 Brut 12% dosage 6g (SO ₂ 40mg)	90	93	3	86	94	8	98	92	-6	92	92	0	6	8.0	40	2	66	3.09	6.1	42					
Mumm 2004 Brut 12% dosage 6g (SO ₂ 20mg)	88	95	7	86	98	12	88	99	11	89	89	0	6	7.0	20	1	35	3.07	6.7	29					
Mumm 2004 Brut 12% dosage 6g (SO ₂ 40mg)	94	92	-2	90	96	6	99	91	-8	90	89	-1	6	7.2	40	2	54	3.07	6.1	36					
Pol Roger 2002 Extra Cuvée de Reserve Brut 12.5% dosage 6g (SO ₂ 20mg)	92	90	-2	94	92	-2	89	89	0	94	89	-5	6	7.5	20	2	34	3.00	7.0	32					
Pol Roger 2004 Extra Cuvée de Reserve Brut 12.5% dosage 6g (SO ₂ 20mg)	90	90	0	89	92	3	98	90	1	94	89	-5	6	7.9	20	2	36	2.99	7.2	34					
Pommery 2002 Brut 12.5% dosage 6g (SO ₂ 40mg)	94	93	-1	94	98	4	98	94	-4	89	87	-2	6	8.4	40	3	45	3.06	5.9	30					
Pommery 2004 Brut 12.5% dosage 6g (SO ₂ 40mg)	90	92	2	89	92	3	98	92	-6	88	92	4	6	6.7	40	2	39	3.02	6.3	25					
Louis Roederer Brut 12% 2002 dosage 6g (SO ₂ 20mg)	92	94	2	88	94	6	98	99	1	92	89	-3	6	8.6	20	2	58	2.93	8.3	40					
Louis Roederer Brut 12% 2004 dosage 6g (SO ₂ 20mg)	90	95	5	86	96	10	99																		

out to a lower panel score. Furthermore, no pattern could be established from the sugar, SO₂, acetaldehyde, or any of the other analytical data to form a rational conclusion about what might be a determining factor.

Sensory perception

What about the presence of oxidative aromas in our notes? There were 32 Champagnes (highlighted in blue) in which one or more tasters found sufficient oxidative aromas to comment on, regardless of quality, low or high. Contrary to popular belief among some of our colleagues, both Essi and I can and will score a wine with oxidative notes very highly should the quality demand it. To be brutally honest, if given the choice between exactly the same wine with or without even the most fleeting glimpse of oxidation, we would always opt for the version without. That does not mean we do not enjoy Champagnes with beautifully understated oxidative notes, and a number of our highest scores demonstrate this.

Simon mentioned oxidative or Sherry-like aromas in just five wines. This is not to say that he did not detect any more, just that he is more tolerant and appreciative of oxidation in Champagne to the point that he studiously avoided the “O” and “S” words, as one of his notes confirm: “he writes trying to avoid the word oxidative.”

Of the 32 oxidative examples we found, no fewer than 15 were og, and nine were 3g. That is 75 percent no- or low-*dosage*. With 24 of the 32 wines also dosed with just 20mg/l of SO₂, that is another 75 percent hit. We did not set out to test SO₂ because its effect on a wine’s development is widely known, and it would have muddled any effect sugar might have. However, we did end up with three different SO₂ levels because the participants could not agree on one, and that has given us a little insight into how these Champagnes aged under different SO₂ levels. With 75 percent of the oxidative wines grouped at the lowest end of SO₂ (though it must be emphasized that 20mg is not really low in itself), it would have been very interesting to have included zero-SO₂—and with the almost frustratingly glacial evolution of magnums, we should have included all sugar and SO₂ levels in 75cl bottles for comparative purposes.

The sensory data for oxidation makes compelling evidence, but of what? Although 75 percent is an extraordinarily high proportion of no- and low-*dosage* Champagnes to exhibit oxidative traits, it does not explain how some Champagnes with og *dosage* can score as high as 99 points without any oxidative aromas. Evidently, there are more factors at play here than simply sugar and sulfur, and the most obvious suspect has to be the closure, since natural cork has a 300x variation in oxygen ingress, which is why I should have requested the use of Diam Mytik. Even among those wines without any TCA taint, the level of variation between Part 1 and Part 2 and the sugar-unrelated dissimilarity between exactly the same wine of different *dosage* in Part 2 was unacceptable in many instances.

And what about the acetaldehyde levels. What do they tell us? In short, absolutely nothing! It would have made this review easier if all the oxidative wines shared high levels of acetaldehyde, as might reasonably be expected, but they did not. None of the wines had a high level of acetaldehyde.

At low levels, acetaldehyde enhances the fruitiness of a wine, but at higher levels, it can have a bruised-apple, nutty, or Sherry character, all of which are oxidative aromas. According to AWRI, “the sensory threshold for acetaldehyde ranges from 100–125mg/l,” and yet the acetaldehyde found in all the Champagnes in the Part 2 tasting ranged from just 21 to 52mg, including all the Champagnes with supposedly oxidative aromas.

Something else is involved, and this is not an uncommon phenomenon. Oxidative or aldehydic aromas are often found in wines that have perfectly normal levels of acetaldehyde. Indeed,

Has Part 2 given me any confidence to cellar low- or no-*dosage* Champagnes? A little, but only if in magnum, sealed with Diam Mytik, and only if I know for sure that it has received at least 20g/l SO₂ at disgorgement

Dr Belinda Kemp (senior scientist at the Cool Climate Viticulture and Oenology Institute, Brock University, Ontario) has told me that she already has a PhD student researching compounds that are responsible for oxidative or aldehydic aromas other than acetaldehyde as part of a massive study of Maillard reactions in wine and numerous ancillary topics. That will be a paper well worth reading, but until it is published, we are left with more questions than answers.

What have we learned from the *dosage* trials?

- The less sugar and SO₂ at the time of disgorgement, the more oxidative aromas generally.
- Despite the majority of oxidative aromas being grouped at no and low sugar and SO₂ levels, this study found no exclusive correlation with either sugar or SO₂.
- Contradictory SO₂ and acetaldehyde data suggest that one or more other compounds might be responsible for oxidative or aldehydic aromas.

If premature oxidation was a talking point among consulting enologists in the region six years ago, critics and retailers have effectively deified the fault in the meantime, promoting it as a style choice worth paying a premium for. What goes around comes around, they say. Fizz itself was once a fault, whereas today it is considered to be a great wine style, but an obvious flaw to the claim that oxidative Champagne is even an intended style is the often pristine quality demonstrated by magnums of the same Champagne. The producer clearly did not make their self-proclaimed oxidative style because any difference could only happen after bottling, due to (as Robillard suspects) inadequate SO₂, with only the “magnum effect” to afford better protection.

What do I take away personally from this project? Certainly not proof of anything, unfortunately, which is why I eagerly await the results of Kemp’s groundbreaking research in Canada. Has Part 2 given me any confidence to cellar low- or no-*dosage* Champagnes? A little, but only if in magnum, sealed with Diam Mytik, and only if I know for sure that they have received at least 20g/l SO₂ at disgorgement. For me, *brut nature* is best consumed when it is fresh and full of vitality, so I will probably continue to drink most that way.

tasting / laying down / Champagne Dosage Trial (Part 2)

Deutz 2004 Brut

(12% ABV) Dosage 0g; SO₂ 20mg

91

EA | A stylish nose, with sweet but subtle fruit expression of ripe white fruit, peach and pear. Bright fruitiness beautifully lined with the subtlest toasty whiffs. Less reductive in style than this producer's 2004 Og/l. The palate actually seems sweet at Og/l! Rich and mouthfilling, but the palate misses the beautiful subtlety of the nose. The dryness bites just at the very end. | **96**

SF | Coconut and vanilla essence immediately evidenced on the nose; the artefact controls the ensemble; the mind's construction faced down by a rough-hewn and almost clumsy palate. | **86**

TS | Smooth, well preserved, but showing some age. Just floating through without showing any age, which is pretty remarkable for a Og dosage, but also very little development on the complexity side either. | **92**

Deutz 2004 Brut

(12% ABV) Dosage 3g; SO₂ 20mg

95

EA | A more pronounced toasty expression on the sweet, baked-apricot nose, with lemon and floral complexity. Nicely balanced palate, with richness and roundness but still-transparent fruitiness. | **98**

SF | Orchard-fruit nose; oyster shell and flint; very composed, with classical restraint and real poise on the finish; fine acidity, understated yet evident autolytic complexity and incredible length. | **92**

TS | Lovely, rich, and complex wine, with the 3g showing quite sweet. | **96**

Deutz 2004 Brut

(12% ABV) Dosage 6g; SO₂ 20mg

92

EA | First bottle: corked and oxidative. Second bottle: rich but a bit muted compared to the other dosage versions and comes with an oxidative and unclean whiff. Seems very sweet, even sweeter than the 6g it actually has. | **96**

SF | An energetic style; citric aromatics, almonds and stone fruit, maybe a touch of reduction; it wears its acidity firmly on its sleeve and there is a little burn at the end... | **87**

TS | First bottle: Corked and oxidized; on the nose, the oxidation dominated the TCA, but on the palate I had to spit it out quick because of the TCA. Second bottle: No TCA, no oxidation; clean, fresh, but well evolved. | **94**

Deutz 2004 Brut

(12% ABV) Dosage 9g; SO₂ 20mg

94

EA | Sweetly fruity, fruit-packed nose, with charred vanilla-laden elements. Lovely, zingy fruitiness, ample, but there is the freshness to back it up. Works very well with this high dosage, too. | **99**

SF | Forward and forthright; fireworks and hints of hearthside; a touch of leafiness on the finish; old-school, well turned out but fading a little. | **88**

TS | Rich, sweet, and nicely mellowed fruit aromas, rich fruit on the palate, a very soft mousse. Very easygoing. | **94**

ESSI AVELLAN MW'S VERDICT

Who said scientific experiments couldn't be fun? Already the concept was mouthwatering: top Vintages from many of the most reputed producers, all from magnum. Furthermore, it provided such a unique opportunity rigorously to test the dosage and aging hypothesis with my own senses.

But before my conclusions, a quick remark about my scores, which might seem unusually high (despite the undeniable top quality of the wines). When we first tasted the wines in 2016, we used the 20-point scale. In between the tasting and publishing, the magazine had shifted to using the 100-point scale, with a conversion formula I find generous (see at the beginning of the tasting section). I felt obliged to use the same scale and conversion formula also for the Part 2 tasting, hence the slightly elevated scores on my part.

My first conclusion is that we should have conducted the experiment in 75cl bottles rather than magnums—or alternatively held the second tasting ten years later! This caliber of Champagne in magnums just ages so slowly that six years was hardly enough time for oxidative or aldehydic characters to surface in most of these wines. But in the wines of more oxidative house styles, differences were already noticeable. For instance, in our Part 1 tasting, I had an equal preference for both Drappier's Og/l dosage and 9g/l dosage (for

both 2002 and 2004 vintages). But three years later, the pattern had changed. The more sugar they had, the better they showed, with the least oxidative characters. The Veuve Clicquot and Pol Rogers also tasted best and least oxidative with more sugar, even if the differences weren't quite so marked. Overall, in the Part 2 tasting, my preference in terms of dosage was almost evenly tied between 6g/l and 9g/l. And I didn't favor the Og/l sample even once. But it wasn't just about the degree of oxidation, it was also about the overall balance, and the Louis Roederer cuvées in particular (with the malolactic fermentation blocked) needed the sugar to sing.

When it comes to the evolution of the wines, the Deutz and Duval-Leroy cuvées had increased in complexity and received the highest increase in points from me. Moët & Chandon and Pommery showed less well for me than in the previous tasting. There wasn't anything wrong with them as such, but they just seemed to be in a less favorable drinking moment right now. The most curious was GH Mumm's performance: In the first tasting, I had a strong preference for the sample with 40mg SO₂, whereas this time it was the samples with 20mg that were showing remarkably well. This tasting wasn't really about vintage performance, but out of interest I noted that I had a clear preference for 2002, eight times out of 12.

TOP WINES

Louis Roederer 2002 Brut dosage 9g (SO₂ 20mg) **100**

Mumm 2004 Brut dosage 6g (SO₂ 20mg) **99**

Duval-Leroy Femme de Champagne 2002 Brut dosage 6g (SO₂ 20mg) **99**

Deutz Cuvée William Deutz 2002 Brut dosage 3g (SO₂ 20mg) **99**

Deutz Cuvée William Deutz 2002 Brut dosage 6g (SO₂ 20mg) **99**

Deutz 2004 Brut dosage 9g (SO₂ 20mg) **99**

Louis Roederer 2004 Brut dosage 9g (SO₂ 20mg) **99**

Louis Roederer 2002 Brut dosage 6g (SO₂ 20mg) **99**

Deutz Cuvée William Deutz 2002 Brut

(12% ABV) Dosage 0g; SO₂ 20mg

94

EA | Absolutely stunning nose, beautifully on the reductive side, in the most refined of ways. Smoky-mineral and coolly fruity. Such detail and purity on the nose. The mousse on the palate seems little coarse and the palate super-tight and nervous. The dryness strips some of the charm. | **98**

SF | Attractive color, a finely poised mousse; praline and almond; quite a raw style, a little brutal, almost rustic in such august company. | **87**

TS | Very fresh and linear, nicely constructed, although the fruit has its ribs showing through. Crisp finish. | **96**

Deutz Cuvée William Deutz 2002 Brut

(12% ABV) Dosage 3g; SO₂ 20mg

93

EA | A similar nose to the previous sample, plus extra charm of sweet fruitiness. Beautifully toasty,

linear, and invigorating. The sugar balance is far superior. Stunning wine. | **99**

SF | Silky, linear, a taut and engaging style; one wonders how much more it has to give; a very classic apéritif style. I might have anticipated it to be a little more forthcoming at this stage, and I wonder if the skeletal structure will finally overwhelm the style. | **88**

TS | Toasty-autolytic aromas. The "driest" 3g tasted so far; again the fruit is a bit ribby, with alcohol showing on the finish. Super-critical. Could easily drink this! | **92**

Deutz Cuvée William Deutz 2002 Brut

(12% ABV) Dosage 6g; SO₂ 20mg

93

EA | Very much sweeter fruit expression on the nose. Sweet lemon-curd tones and vanilla. Still tight on the palate, but longer and richer in expression. Seems sweet and tight at the same time. Keeping very youthful, with accentuated acidity. | **99**

SF | A forthright, albeit somewhat foursquare, structure; firm, with a hint of bruised apple; somewhat rustic. | **86**

TS | Toasty-autolytic aromas, followed by a rich sweetness of fruit on the palate. | **94**

Deutz Cuvée William Deutz 2002 Brut (12% ABV) Dosage 9g; SO₂ 20mg | **94**

EA | Similarly sweetly fruity and lemony. Super-complex fruitiness, with plentiful, pristine fruitiness mingling with subtle and refined toastiness and mineral notes. Less complexity on the palate, more obvious and clearly overly sweet, with sugar masking the detail. | **98**

SF | More open and generous than its peers in the quartet; more cello than violin, maybe; greengage and plum, a little spice, and quite a grippy back palate; structurally a little incoherent, after all. | **87**

TS | Rich and succulent fruit, lovely toastiness on the finish. A lovely, satisfying wine that shows equal best of this vintage with the 0g from this producer, whoever it is. | **96**

Drappier 2004 Brut (12% ABV) Dosage 0g; SO₂ 20mg | **88**

EA | Overt nose of brown fruit and oxidizing aromas. Toffee, smoke, and red apples. Very mature fruitiness already and much more evolved than most wines in the tasting. Withering fruitiness on the austere, dry palate. | **87**

SF | Pleasing floral aromas, a generous color and a firm and persistent mousse; puritanical on the nose; sea salt and a touch of iodine; linear and impressive, an almost gastronomic intensity at the back of the mouth. | **92**

TS | Oxidative aromas, with the fruit on the palate lacking graceful aging and toffee notes on the aftertaste. | **84**

Drappier 2004 Brut (12% ABV) Dosage 3g; SO₂ 20mg | **87**

EA | Similar nose to the previous, equally oxidative. Dusty fruitiness. Slightly fruitier on the palate. A touch phenolic still at the finish. | **88**

SF | Golden color, then a nose of figs and fruits of the forest; hints of peat and undergrowth; the palate has poise and definition, finely etched, and to persist long in the memory. | **88**

TS | Again oxidative elements to the aroma, and the 3g has done little to help its development. | **86**

Drappier 2004 Brut (12% ABV) Dosage 6g; SO₂ 20mg | **91**

EA | First bottle: Badly corked. Second bottle: In condition. Attractive, fruity nose, with pastry complexity and very mild oxidative nuances. Some dusty notes, though. More fruit on the palate, too, and a touch of phenolics. | **90**

SF | Rich and forward; red fruits have bequeathed a spicy attack and an athletic and poised mid-palate; balanced and harmonious, with a pleasing, gently teasing lift on the finish. | **90**

TS | First bottle: Rabidly corked. Second bottle: Sweet and tasty, nicely integrated; apparently 6g makes all the difference. | **92**

Drappier 2004 Brut (12% ABV) Dosage 9g; SO₂ 20mg | **92**

EA | Less oxidative on the nose than the drier versions. Richer in pleasant appley fruit. | **91**

SF | Rich and creamy, orchard fruit and hints of sloe and mandarin; fascinating aromatic; the palate is broad and expressive, the dosage still a little loose-knit, but it will come together with a little patience. | **92**

TS | This is where it all kicks in for the 2004 of this producer: smoother, fresher, fruitier – it actually needs a few more years to mellow out. | **94**

Drappier 2002 Brut (12% ABV) Dosage 0g; SO₂ 20mg | **90**

EA | Sweet, ripely fruity nose, some oxidative, bruised characters and brown fruit. A mouthful with sweet-tasting fruit on the palate. Does not feel bone-dry. | **89**

SF | An impressive color; a nose of ginger and crème fraîche; the palate maintains the leitmotif of spicy austerity, with white pepper and cardamom to the fore. This wine challenges with its beguiling rigor. | **92**

TS | The fruit on the palate is more wine than yeast-aged – a bit angular, lacking finesse, but technically correct. | **88**

Drappier 2002 Brut (12% ABV) Dosage 3g; SO₂ 20mg | **91**

EA | Even less oxidative character. Ripe, baked red-fruit profile. Healthy, attractive fruitiness. Seems sweeter than 3g/l on the palate.

Mouthfilling, round, and sweetly fruity. | **92**

SF | A firm and somewhat forthright style; pepper, spice, and stone fruit all evidenced, grip and lift hitherto struggling for supremacy; a powerful finish to boot. | **90**

TS | The fruit on the palate is much less angular and well integrated with the soft, pincushioned mousse. | **90**

Drappier 2002 Brut (12% ABV) Dosage 6g; SO₂ 20mg | **91**

EA | Sweet, fruity nose, pleasant deep red fruitiness, red apple, pastry, and baking spices.

Muscular, rich palate, with plenty of fruit and sugar nicely masking any phenolics. | **93**

SF | Ripe apple fruit character; nougat and a hint of sourdough; layered and finely textured, powerfully constructed and impressive of length; lively and with great potential. | **91**

TS | Mellow fruit nicely integrated with soft, silky mousse. Long aftertaste. | **90**

Drappier 2002 Brut (12% ABV) Dosage 9g; SO₂ 20mg | **93**

EA | Subdued nose, with the least oxidative characters of the four different versions. Perfectly pristine fruitiness, big, generous body. Can take the sugar very well. | **95**

SF | A poised, somewhat lactic style; hedgerow and spice behind that; broad and quietly persuasive, its sugar still somewhat unknit, the

acidity still in control. Overall, a magisterial ensemble, wonderful to behold. | **94**

TS | Sweet-tasting, toasty-mellow fruit and a soft mousse. | **90**

Duval-Leroy Femme de Champagne 2004 Brut (12% ABV) Dosage 0g; SO₂ 20mg | **95**

EA | Fragrantly toasty, refined, coolly fruity nose. Pear, lime, and smoke. Super-dry palate, cuts the wine off. There is charm only on the nose. Feisty, zingy palate, with plenty of tension. | **96**

SF | Lively mousse, an energetic and very forthright style; modest color but plenty of gusto; nose of apple charlotte and nectarine. Peaches and poached pear adorn the palate; the finish is robust and long. | **92**

TS | Fresh, clean, crisp, really well-focused fruit on nose, palate, and finish. About as good as I could possibly expect from a non-dosage 2004 some 14 years down the line. | **96**

Duval-Leroy Femme de Champagne 2004 Brut (12% ABV) Dosage 3g; SO₂ 20mg | **95**

EA | Refined and detailed nose, with absolutely pristine fruitiness. Similar aromas to the previous sample. The palate is still very tight and comes with an edge of austerity. | **96**

SF | A nose of burned matches betrays a hint of sulfur; the palate is tight, paradoxically tauter than its naked cousin. Orchard fruit to the fore; very bright acidity and impressive length. A solid, declamatory finish. | **90**

TS | Fresh, toasty aromas, lovely, crisp, youthful fruit on the palate. Linear. Delicious. | **98**

Duval-Leroy Femme de Champagne 2004 Brut (12% ABV) Dosage 6g; SO₂ 20mg | **93**

EA | Much softer expression on the nose. Lovely vanilla-laden fruitiness, with refined toastiness and burned sugar complexity. More deliciousness on the palate. Still very dry on the finish, giving a pure, invigorating feel. | **98**

SF | Star bright and forward; pure on the nose, citrus fruits dance with siblings from the orange grove; honeysuckle and white peach on the palate; firm acidity, plenty of potential and a resoundingly impressive finish. | **89**

TS | Fresh, sweet, fruit-salad aromas on both nose and palate, supported by a lovely pin-cushion mousse. Long, satisfying. Can I just drink this please? | **98**

Duval-Leroy Femme de Champagne 2004 Brut (12% ABV) Dosage 9g; SO₂ 20mg | **95**

EA | Lovely, softly and sweetly fruity nose, with mild charred complexity and pristine yellow and green fruit. Balanced, silky smooth palate with length and charm. Nervous and energetic still, even with this dosage. | **98**

SF | Deeper color, a nose where brown sugar presages savory development; the residual

tasting / laying down / Champagne Dosage Trial (Part 2)

sugar sits a little heavily on the palate; Rawlinson decadent, just a little *de trop* at the moment, but I do not fear for its development, the magnum nursing great potential with detailed and rigorous attention. | 90

TS | Rich, sweet, and delicious. This has such a long aftertaste. | 96

Duval-Leroy Femme de Champagne 2002 Brut | 95
(12.5% ABV) Dosage 0g; SO₂ 20mg

EA | Rich, ripe, fruity nose, with sweet apricot fruit. The nose and palate do not match, as the palate is super dry, restraining the fruitiness. | 96

SF | A most attractive nose reconciles fruits from across the spectrum and adds a dash of honey and even tobacco for good measure; cashew and butterscotch, robust, confident phenolic grip, a powerful and most impressive finish. The real deal. | 94

TS | Just the barest hint, whisper, or suggestion of something brown and oxidative echoing on the nose through the palate and onto the aftertaste, where it is reinforced with a touch of toffee—but very good to drink, nonetheless. | 94

Duval-Leroy Femme de Champagne 2002 Brut | 97
(12.5% ABV) Dosage 3g; SO₂ 20mg

EA | Rich and refined nose, with bright, glossy fruitiness. Beautiful toastiness lining the sumptuous fruit. The dosage works nicely, bringing succulence to the wine. Still dry, with tension and vivacity at the finish. | 98

SF | Tight bubbles, a persistent mousse; savory aromatic, recalling a great year; even hints of charcuterie behind the yellow fruit. Delicious mid-palate integration, the modest sugar ingress holding its own marvelously and reassuring that the future is secure and, moreover, that one does not need to resort to too much by way of intervention to secure it. | 96

TS | Again the barest whisper of something brown and oxidative, but underscored this time by extremely fresh, autolytic aromas, making the fruit come alive. Great energy. Lovely silky mousse. | 96

Duval-Leroy Femme de Champagne 2002 Brut | 98
(12.5% ABV) Dosage 6g; SO₂ 20mg

EA | Gorgeous, come-hither nose of sweet, rich, and smoke-complexed fruitiness. Absolutely charming nose. A touch richer and longer again on the palate, but still the finish feels very dry and purifying. Crisp and energetic. | 99

SF | Vinous, rich, incredibly pure and panther-like in its elegant structure; almonds, wet stones, and the firm swell of citric acidity. Too young, in all probability; classic in poise and purpose and potential. | 95

TS | A toasty-autolytic delight. Wonderful. A Champagne of brilliance. Perfect structure and fruit, perfectly lees-aged and perfectly matured after disgorgement. Everything just seems to have come right for this particular vintage and dosage. Long, almost endless. | 99

Duval-Leroy Femme de Champagne 2002 Brut | 94
(12.5% ABV) Dosage 9g; SO₂ 20mg

EA | Big, ripe, and ample nose, with sweet fruity richness. More marmaladey fruit, less toastiness. A big difference on the palate, too, seeming overly sweet and heavy. This wine shows big differences across the different sugar levels. | 96

SF | A persistent mousse and full color; plums and red fruits vie for attention; quite full-on in the mid-palate, the sugar maybe sitting a little awkwardly; one to watch in any event. | 89

TS | Rich and sweet fruit-salad aromas permeating a wonderfully rich, autolytic nose and palate. Long and delicious. | 96

Moët & Chandon 2004 Brut | 88
(12.5% ABV) Dosage 0g; SO₂ 40mg

EA | Some sulfidic, egg-like notes on the nose stripping some aromas; there is pastry and red apple behind. A touch of oxidation. Firm, structured palate that finishes austere due to the dryness. | 89

SF | A hint of reduction; smoke and flint; citric and nectarine; chalk and almond, a hint of mandarin; a somewhat raw style, oyster shell in an age of austerity. A little pinched on the finish. | 89

TS | A winy rather than yeast-complexed aroma on both nose and palate, particularly the finish. | 86

Moët & Chandon 2004 Brut | 90
(12.5% ABV) Dosage 3g; SO₂ 40mg

EA | Sulfidic notes here, too, but a brighter fruit expression. Firm and feisty, vivacious palate. No oxidative notes, and more autumnal fruit than the bone-dry version. | 90

SF | Apple peel and an impression of tannin; austerity once again, and a profile marked above all by acidity; a little gaunt and directionless. | 87

TS | Better, more juicy Maillard character. | 92

Moët & Chandon 2004 Brut | 90
(12.5% ABV) Dosage 6g; SO₂ 40mg

EA | Again some evident sulfur dioxide, but other than that correct with no oxidative characters. Nice balance of sugar and acidity. | 91

SF | Bright fruit character, a touch of white pepper and cinnamon spice; sugar integration is impressive, although the still strident acidity bears no quarter. | 88

TS | Definitely tastes more like a Champagne with 0g or 3g. Long, with a rich rather than sweet finish. | 92

Moët & Chandon 2004 Brut | 92
(12.5% ABV) Dosage 9g; SO₂ 40mg

EA | Fine charred elements on the nose, which has a touch of sulfur. Sweeter but also masking some of the purity and expression of the previous sample. | 90

SF | Luminous hue, large bubbles and a persistent mousse; dried fruit and a hint of soft apricot; finely integrated dosage and impressive structure. | 92

TS | Rich, sweet, and smooth. | 94

Moët & Chandon 2002 Brut | 89
(12.5% ABV) Dosage 0g; SO₂ 40mg

EA | Very sweet nose, with botrytis aromas of apricot, rose petals, and honey. Very rich, and seems sweeter than *brut nature*. A little stripped on the palate, with a short finish. | 89

SF | Fulsome nose; cashew, almonds, and spice. Very ripe fruit, impressive lift, and a near-ethereal quality that will only improve over time. | 92

TS | A bit angular, not together or integrated. | 86

Moët & Chandon 2002 Brut | 92
(12.5% ABV) Dosage 3g; SO₂ 40mg

EA | Less obviously botrytized, with soft fruitiness. Better balanced, but this, too, feels as though it is a little over-sulfured. | 90

SF | Harmonious and beautifully integrated; acidity and sugar dance an eloquent *pas de deux*; praline and soft spice support and bolster an impressive architectural integrity. Long and resonant. | 94

TS | Coming together. Fine yeast-complexed aromas and a smooth, silky mousse. | 92

Moët & Chandon 2002 Brut | 91
(12.5% ABV) Dosage 6g; SO₂ 40mg

EA | Very sweet and big, sweet aromas and sweet flavor. A bit too much, and some sulfur is still noticeable. | 88

SF | Almonds, pineapple, and pistachio; a complex and beguiling ensemble, the extra sugar adding nuance rather than complication, potential rather than unwanted layers. | 92

TS | Smoother, but not really singing yet. | 92

Moët & Chandon 2002 Brut | 89
(12.5% ABV) Dosage 9g; SO₂ 40mg

EA | Pungently floral and seemingly botrytized. Very sweet, too. | 88

SF | A rather bluff and weighty example, lacking for constituent integration and a little volatile of temperament. | 86

TS | Smooth and creamy, with a vanilla-dusted finish. | 92

Mumm 2004 Brut | 90
(12% ABV) Dosage 0g; SO₂ 40mg

EA | Somewhat autumnal fruitiness, with charred characters. On the edge of having oxidative characters. Round, winy palate that is cut short by the dryness. Misses charm. | 89

SF | Attractive nutty aromatic; full color and a playful mousse; complexity and intensity dance on the palate; ripe fruit, nuts again, and a hint of garrigue; all most enchanting; mid-palate power is shrouded by beguiling potential. The length is magisterial, and the lack of sugar is worn as a badge of qualitative candor. | 94

TS | Fresh, autolyzed fruit, a little bit soapy. Soft mousse. Short finish. | 86

Mumm 2004 Brut | 93
(12% ABV) Dosage 3g; SO₂ 40mg

EA | Similar nose to the bone-dry version, a touch

more expressive and deep. The palate has more length and richness. | 90

SF | Explosive palate intensity, linear acidity, and then lime and greengage; youthful and energetic, long and poised, a most impressive example—all things to all men. | 94

TS | Fine, autolyzed fruit; fresh, super-fine mousse. Lively, toasty finish. | 94

Mumm 2004 Brut

(12% ABV) Dosage 6g; SO₂ 40mg

92

EA | A more harmonious and less autumnal nose than the previous sample. Rich and round, feels already a little sweet on the palate. Good length and width. | 91

SF | The familial trait of indulgent and forthright fruit is evidenced here; quince and honeysuckle to the fore, crystallized citric acidity thereafter. The power is a little less focused with this example; almost too much of a good thing, but good, nonetheless. | 89

TS | The fruit really is taking on an extra dimension of yeast-complexing finesse. | 96

Mumm 2004 Brut

(12% ABV) Dosage 9g; SO₂ 40mg

95

EA | Charming toasty richness on the expressive, honey-toned nose. Impressively full and round, caressing and opulently fruity palate. Clearly superior and aromatically the most complex of the four, with sweetness being no problem. | 96

SF | Golden poised, golden apple; the golden mean; the additional sugar only adds more decadent depth and more velvety poise; seductive and therefore hard to resist. | 94

TS | Lovely, mellow, yeast-complexed fruit sitting on a fine, silky mousse. | 96

Mumm 2002 Brut

(12% ABV) Dosage 0g; SO₂ 40mg

92

EA | Very sweet nose, with dried-apricot and honey tones reminiscent of botrytis. A subtle toasty whiff, too, but the fruitiness is not 100 percent clean. The severely dry palate is quite a contrast to the sweet nose. No problems with oxidation, though, just a matter of balance. | 90

SF | Refined and strident; hints of tobacco ash and woodsmoke evidenced; the palate lulls and soothes, its high acidity potently rendered, its fruit character almost tannic in its stone-fruit intensity. Hard to judge today—give it five years, maybe. | 90

TS | So fine and refined on the nose, what an amazing 0g this is! The palate does begin to drag, though, especially on the finish, where it loses its soft touch. Very good, though! | 96

Mumm 2002 Brut

(12% ABV) Dosage 3g; SO₂ 40mg

92

EA | Sweeter and softer, a cleaner expression than the bone-dry one. More expressive and balanced on the palate, too. Lots of fruit and a mouth-filling richness. | 92

SF | A pleasing kaleidoscope of flavors, acidity and sugar well integrated, powerful but not strident,

persuasive but not in a flattering manner.

A fascinating wine. | 91

TS | A creamy-lactic aroma spoils the start of this wine, but the coffee notes on the finish are a delight. | 92

Mumm 2002 Brut

(12% ABV) Dosage 6g; SO₂ 40mg

93

EA | A sweetly fruity nose again, with apparently botrytized but cleaner aromatics. Starts to be a little plump on the palate at this dosage. Good length and richness. | 92

SF | Luminous hue, with a hint of Chablisien green; floral aromas, woodsmoke and the forest floor; sugar and tannin sit a little awkwardly today... Certainly on the young side. | 92

TS | Fresh, yeast-complexed fruit aromas followed by a fine, crisp, zesty-mellow finish. | 94

Mumm 2002 Brut

(12% ABV) Dosage 9g; SO₂ 40mg

93

EA | Soft and sweet honey-toned fruitiness, with dried apricots and orange blossom. Richly fruity, round, and opulent. A generous, sweet style. The sweetest version tastes the cleanest and most smoothly textured, even if there is obvious sweetness. | 94

SF | Deep, generous sheen, attractive nose of mango, praline, and grapefruit peel; the sugar is still a little foursquare but sure to integrate. Not singing today, but the composer is clearly sound of mind. | 91

TS | Lovely mellow, coffee-infused fruit aromas nose and palate. | 94

Mumm 2004 Brut

(12% ABV) Dosage 0g; SO₂ 20mg

91

EA | Gorgeous toasty nose. Lovely burned sugar tone, cotton candy and vanilla. Very dry and severe on the palate. Delicious fruit, perky and pure. | 98

SF | Toasty vanilla; generous color, lime zest and a firm structure; mid-palate quite firm, with stone-fruit personality and just a hint of leafiness at the end. A little foursquare. | 86

TS | Slightly oxidative, gunpowdery aroma, fresh, yet acetaldehyde poking through on the fine, dry, crisp palate, particularly on the finish. | 90

Mumm 2004 Brut

(12% ABV) Dosage 3g; SO₂ 20mg

95

EA | Sweeter fruitiness on the nose, but also plenty of perfumey toast and burned sugar, marshmallow. Very dry on the palate still, fresh and zingy, some more fruit than on the previous sample. Very similar still. | 98

SF | Bright golden color, attractive nose of praline, crystallized lemon, and flowers. Structurally more harmonious than the zero dosage; lime essence, an almost flinty character, honeydew melon and a firm finish. Precocious still, but with burgeoning self-confidence. | 90

TS | Gunpowdery-toasty aroma, richer, cleaner, fruitier on the palate, without any hint of acetaldehyde. Extraordinarily young. | 96

Mumm 2004 Brut

(12% ABV) Dosage 6g; SO₂ 20mg

95

EA | Softer and sweeter expression on the nose, less burned sugar, more toast and sweet vanilla tones. Lovely balance of sugar and acidity on the sumptuous, silky palate. The sugar level works perfectly. Long, juicy, and super-sophisticated. | 99

SF | Rich golden burnish; nose of hay and later summer; umami, and toasty rigor; acidity holds it together with seamless elegance; an almost phenolic grip at the end. | 89

TS | More toasty than gunpowdery, with crisp, linear richness of fruit. Long, sustained, focused finish. | 98

Mumm 2004 Brut

(12% ABV) Dosage 9g; SO₂ 20mg

96

EA | Soft, rich, and sweet nose, charred notes, tropical fruit and sweet toastiness. Sweet and sumptuous on the fleshy, rich palate. Satiny and long. Seems a little sweeter than necessary for precision or balance, but still lovely. | 98

SF | A very attractive nose of Mirabelle plum and Viennese pastry. The stone-fruit structure is statuesque and long; fine definition and filigree elegance. Finely constructed decadence; plums on the finish. | 92

TS | Toastiness and gunpowder subdued, but more toast on the nose. Richness, almost sweet by comparison but would just seem to be rich-fruitiness in isolation. | 98

Mumm 2002 Brut

(12% ABV) Dosage 0g; SO₂ 20mg

92

EA | Rich, developing nose, with just a touch of brown or bruised fruit of an oxidative kind. Vanilla red fruit and baking spices. The palate has austerity and seems to be cut short. Some phenolics, too. The second bottle does not have the oxidative characters. It comes with a beautiful nose of detailed, pristine fruitiness. Still a touch short and dry at the finish. | 94

SF | A deep color; honey and praline on the nose; a touch lactic, with hints of tobacco and earth behind that. The palate is broad and creamy, fulsome and surprisingly rounded for all of its lack of sugar. Brown sugar and a touch of mocha on the finish. | 89

TS | First bottle: Oxidative aromas spilling into the fruit. (Would have been 84 points.) Second bottle: Pure and precise—what a difference a cork can make! Not TCA, but simply a difference in porosity and oxygen ingress. There is a little oxidative note, but only natural in a 16-year-old Champagne. | 94

Mumm 2002 Brut

(12% ABV) Dosage 3g; SO₂ 20mg

93

EA | No oxidative tones on the nose. Lovely, sweet, luscious fruitiness, more yellow than red or brown fruit. A touch of burned sugar. Long, soft palate that finishes very dry, otherwise nicely balanced and generous. | 96

SF | Diffuse bubbles, and a gently evolved lemon bright color; praline and nectarine; forest floor and an endearing complexity. Acidity is tightly knit;

tasting / laying down / Champagne Dosage Trial (Part 2)

impressive length and a firm, resolute finish. | **91**
TS | Lovely, fresh richness of angular fruit on both nose and palate. More of an oxidative style, but not oxidative in any negative sense, just a more open and generous style. | **92**

Mumm 2002 Brut | **92**
(12% ABV) Dosage 6g; SO₂ 20mg

EA | Soft, slightly muted nose, with sweet, deep fruitiness. Lovely, sweet, burned sugar notes, caramelized pineapple. Rich, mouth-filling, soft palate, lovely length, with plentiful fruit lasting until the very finish. | **96**
SF | Welsh gold and a strident nose of flowers and iodine; complex and tightly wrought, an impressive edifice. Vinous grip, harmonious sugar, teasing the end of the palate and intimating further development. Amazing steely rigor on the finish; adamant. | **92**
TS | Some gunpowdery aroma. Sweetness of fruit, but short and a bit of toffee showing through on the finish. | **88**

Mumm 2002 Brut | **92**
(12% ABV) Dosage 9g; SO₂ 20mg

EA | First bottle: corked. Second bottle: good. Sweet, soft nose of yellow and red fruit. Round, plush palate. There is evident sweetness, which brings plenty of roundness and generosity to the wine. It does not need all the sugar for the fruit-and-acid balance, but it nevertheless suits the style. | **94**
SF | Pincushion bubbles and a faintly reductive nose; floral, elegant, and composed; beeswax and wet pavements; the palate is very complete, flinty, citrus, and long, wearing its sugar with careless rigor, of a fine and regal pedigree. This still has much more to give; impressive depth and potential. | **92**
TS | First bottle: Corked. Second bottle: Fresh autolytic aroma, with delicious fruit on a generous palate and rich, caramel-raised aftertaste. | **90**

Pol Roger 2004 Extra Cuvée de Réserve Brut | **88**
(12.5% ABV) Dosage 0g; SO₂ 20mg

EA | Rich, ripe, fruity, evolving nose. A touch of oxidation, especially on the austere, drying palate, craving for sugar. | **86**
SF | Aromatic lift, citric fruit, hedgerow and the orange grove; very attractive; distinguished, regal mid-palate, composed, linear; flint and oyster shell; great pedigree and resonance. | **92**
TS | A bit ribby, bare and unbalanced. Nothing wrong, just that this wine needs a dosage. | **86**

Pol Roger 2004 Extra Cuvée de Réserve Brut | **87**
(12.5% ABV) Dosage 3g; SO₂ 20mg

EA | This one, too, has oxidation, but a sweeter, deeper feeling of fruitiness. Dusty aromatics but the balance works much better on the palate than the bone-dry version. | **87**
SF | Nectarine and hints of plum; red fruit evidenced and whistle-clean acidity. The palate is

surprisingly challenging, linear and a touch ascetic. Maybe time is required here, but it's hard to love now. | **87**
TS: Definitely better with 3g, but it is still a bit austere. | **88**

Pol Roger 2004 Extra Cuvée de Réserve Brut | **90**
(12.5% ABV) Dosage 6g; SO₂ 20mg

EA | Much less oxidation here on the nose and a much cleaner fruit expression. A lovely whiff of charred nuances, too. Sweetly fruited on the front palate, but still finishes dry. Good length and succulent fruitiness. | **90**
SF: Honey and almond; elegant and beautifully restrained; the palate puts on weight, with dignity and aplomb; the fruit is not ripe, rather linear and refined, very long and impressive. | **89**
TS: Vanilla-dusted French-toast aromas give this wine some life. | **92**

Pol Roger 2004 Extra Cuvée de Réserve Brut | **93**
(12.5% ABV) Dosage 9g; SO₂ 20mg

EA | Even more of the charred notes than the previous sample on the nose, expressive and richly fruity. Very fine fruitiness, and it feels like it has good potential left. For this wine, sugar did miracles. | **93**
SF | Ripe and expressive character, citric and powerful, does not lack for weight and gravitas; linear and integrated; an imprimatur from a worthy vintage, its relatively high sugar well integrated. | **90**
TS | Definitely the best of all dosages for this wine. Elegantly rich and sweet, linear fruit, with distinct finesse evolving on the finish. | **96**

Pol Roger 2002 Extra Cuvée de Réserve Brut | **87**
(12.5% ABV) Dosage 0g; SO₂ 20mg

EA | Very sweet fruitiness, with baking-spice aromatics on the nose and yeasty complexity. Very little oxidative character. The complete dryness just strips it of some charm and length. | **89**
SF | Evolved aromas, hints of herbs, licorice, and mint, and a whisper of oxidation. The palate lacks geometrical integrity; poised and crisp but somewhat angular. | **87**
TS | Okay, but I am not grabbed by any of its defining criteria. | **84**

Pol Roger 2002 Extra Cuvée de Réserve Brut | **76**
(12.5% ABV) Dosage 3g; SO₂ 20mg

EA | The first bottle was dirty, chalky. The second bottle was the same, but to an ever greater degree. Very different from the other samples. Odd and faulty. | **75**
SF | There is a rather shrill, metallic voice here, the acidity being far from fully integrated, the ensemble accordingly lacking integrity and resonance. | **83**
TS | First bottle: Dirty chalk. Second bottle: Filthy chalk! (Ladybug taint?) | **70**

Pol Roger 2002 Extra Cuvée de Réserve Brut | **90**
(12.5% ABV) Dosage 6g; SO₂ 20mg

EA | Sweet and floral on the nose, a bit pungent and highly powerful. At this dosage, this is all slightly too much, the sugar bringing amplitude and fattiness. | **89**
SF | Floral and poised, with elegant lift, ripe fruit personality and an impressive finish. Hints of verbena and thyme add complexity and interest; a linear vinous profile, a little unusual but not lacking for appeal. | **89**
TS | Smooth and rich. | **92**

Pol Roger 2002 Extra Cuvée de Réserve Brut | **93**
(12.5% ABV) Dosage 9g; SO₂ 20mg

EA | Ample, sweet, rich, and charming nose. Big and bold and suitably sweet on the palate. No dirty chalk, no oxidation. These four are a variable bunch. | **92**
SF | Deep Spanish gold color. An evolved nose, gently toasty, smoke and truffle; an angular and surprisingly austere palate, but the caress of steel does not fail to seduce with an almost infuriating vigor. | **92**
TS | Vanilla-sweetness. Has an energy that the other dosages do not. | **94**

Pommery 2004 Brut | **89**
(12.5% ABV) Dosage 0g; SO₂ 40mg

EA | A beautifully evolving, age-mellowed nose, with ample, expressive fruitiness. Very dry and a little short on the palate, but this is otherwise correct. | **91**
SF | Lively mousse and tight youthful aromas, citric and orchard fruit; the palate is suitably austere, with long mineral notes and a smoky, felicitous finish. Steely rigor is not inappropriate here. | **90**
TS | Fine, but angular. Lean, but bare ribs. | **86**

Pommery 2004 Brut | **86**
(12.5% ABV) Dosage 3g; SO₂ 40mg

EA | First bottle: corked. The second bottle is fresh, but still a bit tight and nervous, missing some charm. | **90**
SF | A little compromised; there is a touch of TCA here. | **85**
TS | First bottle corked. Second bottle not absolutely clean. | **84**

Pommery 2004 Brut | **92**
(12.5% ABV) Dosage 6g; SO₂ 40mg

EA | Overt rich fruitiness showing evolution but no oxidation. Sweet on the palate, but this suits the evolved style. | **92**
SF | An embarrassment of riches; ripe tropical fruit and a powerful imposing acidity; mint and even a hint of eucalypt underwrite complexity. This is a deft and impressive piece of winemaking, with great length. | **92**
TS | Fine, lightly rich, yeast-complexed fruit, with absolutely no bare-bone ribbiness. | **92**

Pommery 2004 Brut 92
(12.5% ABV) Dosage 9g; SO₂ 40mg

EA | A more subdued nose, with pastry evolution. Full, rich, and sweet on the palate. This takes the sugar well. | 92

SF | Ripe and gently tropical on the nose; an impressive structure and balanced acidity. Still young and already finely integrated. Long and imposing. | 90

TS | This hits all the spots: fine, citrus-led fruit, minerality, and a long, linear, smooth finish. | 96

Pommery 2002 Brut 93
(12.5% ABV) Dosage 0g; SO₂ 40mg

EA | Deep and overt, beautifully developed, richly and ripely fruity nose. Minor oxidative characters. A suppressed palate, compared to the generous, fruity nose. Need some sugar. | 90

SF | Powerful, citric and spice; soap-stone and a hint of lavender; balanced herbal attack, impressive weight and a gently savory finish; pleasingly complex, with a fair way to go. | 92

TS | This is a really fine, complex, classic, mature Champagne, and when this has 0g, I am doubly impressed! | 96

Pommery 2002 Brut 94
(12.5% ABV) Dosage 3g; SO₂ 40mg

EA | A little more expressive than the driest version, with lovely burned sugar complexity. The balance on the palate works well, and there are fewer oxidative aromas. | 94

SF | A mild reduction blows off; then a distinguished palate, acidity and sugar well balanced, each to his own, neither assuming too much—the perfect suspension of a very fine Champagne. The finish is domineering at the moment but will surely soften and allow a full expression to a very worthy candidate. | 91

TS | In a different league from the 0g! Lovely, restrained, refined, smooth, and generous. | 98

Pommery 2002 Brut 93
(12.5% ABV) Dosage 6g; SO₂ 40mg

EA | Very ripe, sweet, and waxy aromas on the nose. Soft and fresh on the palate. | 94

SF | Citric acidity, hints of glazed fruit and even toffee. The palate a little disjointed beyond a leafy complexity. | 87

TS | Another stunner. Obviously 6g is as good as 3g—and that was brilliant! | 98

Pommery 2002 Brut 93
(12.5% ABV) Dosage 9g; SO₂ 40mg

EA | This has a less expressive but softer nose. The apparently botrytized aromas come across as less clean. | 91

SF | An impressive example to demonstrate the great virtues of the vintage; ripe fruit and natural acidity held in perfect counterpoint; a relatively generous dosage does not interfere; genuine complexity, its full manifestation still to come. Worth waiting for. | 92

TS | Delicious: I love this wine! | 96

SIMON FIELD MW'S VERDICT

Tom is sure to despair of me! I fear that my results do little to corroborate his admirable hypothesis—namely that the sugar from the dosage incubates the sulfur like a slow-release capsule and therefore protects wines from oxidation over time and thus enhances their quality by preserving freshness and poise as the Champagnes age. The almost vulgar prospect of adding sugar is thereby transformed into a key part of the process and a qualitative plus, its merits positive to challenge all those contrarians who point to earlier and warmer harvests as the best justification for the empirical reality of a reduction in dosage.

First things first, however. This was a superb tasting, and the pleasure of sampling from magnum from these great houses from two sublime vintages was a pleasure indeed. That analysis does not necessarily support a consistency of appreciation, however, maybe indicative in itself of the transformational significance in these three key years of development. Once again, though, I marginally preferred the 2002s to the 2004s; nothing hugely contentious there. But of the 31 wines scored at 92 or above, those with zero dosage (11 out of 31) were the most popular, those with a dosage of 9g/l coming second (9 out of 31). This seemingly perverse polarity can only be spun into something approaching a definitive statement when it is conceded that the wines with 9g/l were the most popular in the very top-scoring wines, namely those scoring 93 and over. Great wines, indeed—with the sugar perfectly integrated in all cases. Here, maybe, the results cleave to the central hypothesis, which will surely be more coherently underscored by my two fellow tasters.

TOP WINES

Duval-Leroy Femme de Champagne 2002 Brut dosage 3g (SO₂ 20mg) 96

Duval-Leroy Femme de Champagne 2002 Brut dosage 6g (SO₂ 20mg) 95

Duval-Leroy Femme de Champagne 2002 Brut dosage 0g (SO₂ 20mg) 94

Draprier 2002 Brut dosage 9g (SO₂ 20mg) 94

Mumm 2004 Brut dosage 0g (SO₂ 40mg) 94

Mumm 2004 Brut dosage 3g (SO₂ 40mg) 94

Mumm 2004 Brut dosage 9g (SO₂ 40mg) 94

Moët & Chandon 2002 Brut dosage 3g (SO₂ 40mg) 94

Ruinart Dom Ruinart 2002 Brut dosage 3g (SO₂ 40mg) 93

Louis Roederer 2004 Brut dosage 9g (SO₂ 20mg) 93

Taittinger 2002 Brut dosage 9g (SO₂ 20mg) 93

Louis Roederer 2004 Brut 93
(12% ABV) Dosage 0g; SO₂ 20mg

EA | Gorgeous, radiantly fruity nose, with pristine fruitiness of vanilla laden, peachy fruit. The acidity is searing on the tight palate, which has a drying minerality at the finish. Very pure fruit expression, though free of any oxidative characters. The dominant acidity is the only thing pulling the points down. | 95

SF | Broad and indulgent bubbles; a pungent aromatic of goat's cheese and acacia; the palate is equally indulgent, lactic, too. A somewhat broad-brush approach, ultimately very satisfying, its creamy seduction tempered by a cerebral subtext. | 91

TS | So youthful! Fresh, gently toasty, autolyzed fruit aromas, lovely acids, long, and focused. | 94

Louis Roederer 2004 Brut 95
(12% ABV) Dosage 3g; SO₂ 20mg

EA | Similar to the previous sample; a touch softer on the nose compared to the bone-dry one. More expressive and succulent on the palate, and the sugar:acidity ratio works a bit better. | 98

SF | Lifted, forthright, assertive, and still youthful; the magnum's birthright; apple-fruit on the palate, citrus and flinty, pepper and nutmeg; very complete. Still young, precocity no impediment to a qualitative underscore. | 91

TS | Lovely, softer, more toasty, better integrated. Still astonishingly young! | 96

Louis Roederer 2004 Brut 95
(12% ABV) Dosage 6g; SO₂ 20mg

EA | Again, a softer nose, with sweeter, riper fruit expression, sweet vanilla aromas pushing through, with a highly refined toastiness. Soft and caressing on the palate, but still the acidity stands out, even if the balance is much better than in the drier versions. Long, pure finish. 98

SF | Deep color, lively mousse, and pleasing aromatic of lemon and mandarin, acidity poised, an impressive underwriting texture and dexterity on the finish. Precision and generosity, effortlessly compromised. | 92

TS | Of course, the aromas come first, but the first thing to hit me when tasting this wine was its gorgeously, soft, smooth, and velvety mousse | 96

Louis Roederer 2004 Brut 96
(12% ABV) Dosage 9g; SO₂ 20mg

EA | Stunningly expressive nose, with baking spices such as cardamom surfacing alongside toast, vanilla, apricot, and white flowers. The mousse is soft and caressing, super-seductive. A long, succulent palate, with sweet-fruit appeal and a dancing, tingling texture full of playfulness. A charmer. | 99

SF | Deeper color than its siblings, but with the same peppery subtext, voices from the kitchen garden, luminosity, and a beguiling self-belief. The sugar is well integrated, the ensemble long and eloquent. Still so young... | 93

TS | Lovely, lovely mousse again, it's amazing how much finesse it adds! | 96