IN THE HIGH COURT OF THE REPUBLIC OF SINGAPORE

[2018] SGHCR 13

HC/S 26 of 2016
HC/SUM 1654 of 2018

Between

Element Six Technologies Ltd

… Plaintiff / Respondent

And

IIa Technologies Pte Ltd

… Defendant / Applicant

JUDGMENT

[Civil Procedure – Discovery of Documents]
[Patents and Inventions – Experiments]

Element Six Technologies Ltd
v
IIa Technologies Pte Ltd

[2018] SGHCR 13

High Court — Suit No 26 of 2016 (Summons No 1654 of 2018)
Justin Yeo AR
26, 27 June, 17 July 2018

27 August 2018 Judgment reserved.

Justin Yeo AR:

1 This judgment concerns the discovery of documents relating to experiments and experimental material in the context of patent litigation. It also touches on the area of legal professional privilege (referred to, in the rest of this judgment, as "privilege"), given that such documents may often be privileged from disclosure.

Background facts

2 The brief background to this suit was previously set out in *Element Six Technologies v IIa Technologies* [2017] SGHCR 16. In essence, Element Six Technologies Ltd ("the Plaintiff") is the proprietor of two Singapore Patents bearing the numbers 115872 ("the '872 Patent") and 110508 ("the '508 Patent"). The '872 Patent is in respect of an optical quality synthetic single crystal chemical vapour deposition ("CVD") diamond material and the method

for its production. The '508 Patent is in respect of a method of producing CVD diamonds of a desired colour.

3 The Plaintiff brought the present suit against IIa Technologies Pte Ltd ("the Defendant"), claiming that the Defendant had infringed 33 claims in the '872 Patent and 24 claims in the '508 Patent. The Plaintiff's claim rests on four trap purchased CVD diamonds ("the Samples"), each of which was allegedly grown by the Defendant and trap purchased from Gemesis Diamond Company ("Sample 1"), Microwave Enterprises Inc ("Sample 2"), Pure Grown Diamonds ("Sample 3") and the Defendant itself ("Sample 4").

4 The defence comprises several levels. The Defendant has denied knowledge of Samples 1 to 3 and called into question issues relating to the provenance of those samples. The Defendant has also asserted that it has no knowledge of whether the conditions or characteristics of all four Samples had been changed after the Samples had allegedly left the Defendant's possession and custody. The Defendant has further contended that the Samples do not infringe the asserted claims of the Patents. Finally, the Defendant has also brought a counterclaim for the revocation of the Patents.

5 The Plaintiff has proceeded under the regime ("the Notice of Experiments Regime") in O 87A r 6 of the Rules of Court (Cap 322, R 5, 2014 Rev Ed) ("Rules of Court"). Under the Notice of Experiments Regime, a party desiring to establish any fact by experimental proof has to serve on the other party a notice stating the facts which it desires to so establish, giving full particulars of the experiments proposed to establish those facts. It is trite that the Notice of Experiments Regime is intended to ensure that a full and fair

analysis can be carried out by the parties on the matters sought to be proven by way of the experiments described in the Notice of Experiments.

6 On 6 October 2016, the Plaintiff filed its list of documents, disclosing technical notes describing the various experiments conducted on the Samples ("the Technical Notes"). On 23 December 2016, the Plaintiff filed its Notice of Experiments, containing 22 facts that the Plaintiff intended to prove by way of experimental evidence. On 13 January 2017, the Defendant filed its response to the Plaintiff's Notice of Experiments, stating that it did not admit to any of the 22 facts.

The present application

7 On 28 March 2018, the Plaintiff applied by way of Summons No 1478 of 2018 ("SUM 1478") for specific discovery of 13 classes of documents pursuant to O 24 rr 1 and 5 of the Rules of Court, as well as electronic discovery pursuant to Part V of the Supreme Court Practice Directions. On 9 April 2018, the Defendant applied by way of Summons No 1654 of 2018 ("SUM 1654") for specific discovery of 12 classes of documents.

8 The two applications were scheduled to be heard together on the same day. They were eventually heard over four days in June and July 2018 in the light of the number of requests made and the complex factual substratum relating to each request. About 400 pages of written submissions were tendered to the court, together with voluminous bundles of authorities, affidavits and other documents. On 27 August 2018, I rendered judgment for both applications, with oral grounds of decision for SUM 1478 and seven of the 12 requests in SUM 1654. The remaining five requests in SUM 1654 relate to novel

points of law touching on the discovery of material relating to experiments ("the Experiment Requests"), and are canvassed more fully in these written grounds.

9 The Experiment Requests are as follows:

> [Request 2] All documents (including but not limited to reports, records, calibrations, written instructions, manuals) relating to any experimental procedures conducted on, machinery setup and/or test results (including the raw data) of, the [Samples] (regardless of whether the [Samples] had come into the Plaintiff's possession or not);
>
> [Request 3] All documents relating to the standards and/or benchmarks created as a result of any experiments, insofar as these standards and/or benchmarks were used by and/or referred to in the [Technical Notes] … All such standards and/or benchmarks referred to in the Technical Notes are described in Annex B [to SUM 1654].
>
> [Request 4] All documents in their original format that provide the raw results and/or data for all tests performed on the [Samples] that were eventually relied on to prepare the Technical Notes, including but not limited to:-
>
> > i. The original format of the following documents that were disclosed by the Plaintiff on 21 March 2018:-
> >
> > > a. "05 NL530 4x A1.pdf" to "05 NL530 4x Z3.pdf"
> > >
> > > b. "04 NL623-03 4x A1.pdf" to "04 NL625 4x C3.pdf"
> > >
> > > c. "05 NL702 4x A1.pdf" to "05 NL702 4x D4.pdf"
> > >
> > > d. "04 NL719-06 4x A1.pdf" to 04 NL719-06 4x D5.pdf"
> >
> > ii. Coloured images captured by the Metripol system that have been converted into black and white images by the Plaintiff in the documents disclosed on 21 March 2018.
>
> [Request 5] All documents relating to work-up experiments that were used and/or relied on and/or referred to in the Technical Notes;
>
> [Request 6] All documents relating to any experiments that were conducted on the [Samples] that were subsequently abandoned and/or otherwise not relied on by the Plaintiff;

The law on discovery of experimental material

10 In relation to the Experiment Requests, the parties relied heavily on three decisions of the UK Patents Court, taking very different positions on the ambit of these decisions and the applicable legal principles to be gleaned therefrom. The three decisions are *Electrolux Northern Ltd v Black & Decker* [1996] FSR 595 ("*Electrolux*"), *Mayne Pharma Pty Ltd v Debiopharm SA* [2006] FSR 37 ("*Mayne Pharma*") and *Magnesium Elektron Ltd v Neo Chemicals and Oxides (Europe) Ltd* [2017] EWHC 2957 ("*Magnesium Elektron*"). In gist:

(a) Defendant's counsel contended that *Mayne Pharma* and *Magnesium Elektron* were the operative cases representing the current state of English law in relation to the disclosure of experiments and experimental material in general, and that *Mayne Pharma* had "overruled" *Electrolux*. Relying on *Mayne Pharma* and *Magnesium Elektron*, Defendant's counsel argued that disclosure ought to be given for work-up experiments as well as experiments that were not expressly referred to in the Plaintiff's Notice of Experiments, whether or not these experiments were "abandoned" by the Plaintiff.

(b) Plaintiff's counsel argued that *Mayne Pharma* and *Magnesium Elektron* applied only to the specific context of "work-up experiments", and that *Electrolux* continued to be operative in the context of "abandoned experiments".

11 It is useful to consider the three decisions in some detail, before setting out my views on the applicable legal principles.

Electrolux

12 The first case to be considered is *Electrolux*. In *Electrolux*, each party suggested that the other had carried out experiments which had not been disclosed, and argued that the court should infer that those experiments had been conducted, had proved helpful to the opposing party, and had been abandoned for that reason.

13 Laddie J considered a fairly contemporaneous but unreported decision of Jacob J in *Honeywell Ltd v Appliance Components Ltd* (February 22, 1996, unreported) ("*Honeywell*"). In *Honeywell*, Jacob J expressed the view that it could "hardly be right" for a party to suppress experiments that had been conducted but which did not support (or perhaps even undermined or destroyed) the arguments put forward by that party. As such, Jacob J inferred from a party's failure to put certain experiments in evidence that those experiments did not support the position advanced by that party.

14 Laddie J differed from Jacob J's views on this issue, for the following reasons (*Electrolux* at 612–614):

> (a) The litigation system proceeds on the basis that, save in relation to discovery, each party puts forward the material which it believes supports its case or undermines its opponent's case, with such evidence subject to testing by cross-examination at trial. No party is obliged to call witnesses, whether factual or expert, who are hostile to his case. Indeed, a party is not obliged to proffer evidence on any point, and may instead opt to proceed through cross-examining his opponent's witnesses or relying on a favourable burden of proof.

(b) In the context of patent claims, many experiments eventually fail to support the propositions for which they were advanced. The reality is that experiments are often abandoned for a variety of reasons, for instance, because they were not clear enough, the experimental technique was too open to attack, the expert who would give evidence in relation to these experiments would make a dreadful witness, or counsel had come to a view that there was a better and simpler way to prove the point in question, *etc*. Indeed, experiments may also be abandoned because they may – on initial impression – appear to support an opponent's case, and it would take a lot of complicated evidence to disprove that initial impression. As such, it would be wrong for the court to simply infer, from a party's abandoning of experiments, that the experiment was favourable to the opposing party.

(c) If a court would likely infer that an abandoned experiment supported the opposing party's case, the party from whom discovery is sought would be "in a quite impossible position" (*Electrolux* at 614). That party would have to disclose the experiments he intended to abandon, and also set out the reasons for abandoning those experiments. This may involve waiving privilege in relation to the advice of counsel to abandon the experiment in question, and may also involve adducing further evidence of experts (who may not otherwise be called) to explain why the abandoned experiments were unnecessary and unhelpful to the matter. The court would eventually be saddled with the additional burden of considering whether there was a sensible and non-incriminating reason for abandoning those experiments. Forcing a party to disclose abandoned experiments would therefore result in parties being driven to spend time and money on what would likely be an

irrelevant exercise, and would be "a step in the wrong direction" at a time where the UK Patents Court was attempting to "slimline proceedings and cut down on costs" (*Electrolux* at 614).

15 Laddie J also found it difficult to see why adverse inferences should be drawn in the context of the non-disclosure of abandoned experiments, while such inferences were not drawn in the context of a party interviewing experts and choosing to retain some while abandoning the others. He concluded that it could not be in the interests of the administration of justice "to force parties to disclose all the other unfruitful avenues they have pursued on the off chance that some might be arguably supportive of their opponent's case" (*Electrolux* at 615).

16 Despite Laddie J's disagreement with Jacob J's views in *Honeywell*, Laddie J observed that there was good reason for Jacob J to have come to the conclusions that he did on the facts of *Honeywell* – in that case, there was a direct experimental way of proving anticipation, but the infringer had opted against putting such direct experiments into evidence, instead preferring to adopt a "convoluted" route in proving anticipation (*Electrolux* at 615). In such a situation, Jacob J's drawing of an adverse inference was warranted. However, this did not "justify the imposition of a general requirement on parties to disclose abandoned experiments, or abandoned endeavours to find any other form of evidence" (*Electrolux* at 615).

Mayne Pharma

17 About a decade after *Electrolux*, the UK Patents Court was faced with an application for disclosure of documents relating to "any experiments which may have been performed as part of the 'work up' or preliminary investigation

leading to the experiment forming the subject matter of a notice of experiments" (*Mayne Pharma* at 658; referred to for convenience as "work-up experiments").

18 The patents in *Mayne Pharma* related to a drug employed in the treatment of colorectal cancer. One of the patents claimed a method of preparing the drug, and an objection raised was that two pieces of prior art had already disclosed processes which, if carried out, would inevitably fall within the claims of the patent. This type of case is known in patent circles as the "inevitable result" type of cases, in which the party applying to revoke the patent must show that in following the instructions contained in the prior disclosure, the person skilled in the art would inevitably come within the patent claims (*Mayne Pharma* at 658, citing the decision of the House of Lords in *SmithKline Beecham Plc's (Paroxetine Methanesulphonate) Patent* [2006] RPC 10; [2006] FSR 37).

19 Pumfrey J considered both *Electrolux* and *Honeywell*. He opined that Laddie J's suggested parallel between abandoned experiments and abandoned experts (see [15] above) was "wide of the mark", because of the difference between experimental evidence and expert opinion evidence. The latter was in the nature of an opinion and was subjective in nature, while the former was "intended to provide a degree of objective confirmation or corroboration of the subjective views of the experts" and would provide "a fixed point against which the experts may themselves be assessed" (*Mayne Pharma* at 661). Pumfrey J favoured the approach in *Honeywell*, observing that it "reflect[ed]s a need to reveal the full story rather than just its culmination". However, Pumfrey J emphasised that his observations were made in the specific context of work-up

experiments, and that he "[did] not wish to be taken to be expressing a view in any other context at all" (*Mayne Pharma* at 661).

20 Pumfrey J went on to consider the dimension of privilege in relation to the disclosure of work-up experiments, observing that neither *Honeywell* nor *Electrolux* dealt with this issue. Citing *Nea Karteria Maritime Co Ltd v Atlantic & Great Lake Steamship Corp and Cape Breton Development Corp (No 2)* [1981] Com LR 138 ("*Nea Karteria*"), Pumfrey J concluded that the service of the Notice of Experiments amounted to a waiver of privilege, and that such waiver would extend to work-up experiments (*Mayne Pharma* at 662). Pumfrey J expressed doubt over whether such a waiver of privilege would extend *beyond* work-up experiments, but opted against expressing further views on this issue. On the facts of *Mayne Pharma*, Pumfrey J declared that any privilege otherwise attaching to documents relating to the work-up experiments in question was waived by the service of the Notice of Experiments.

Magnesium Elektron

21 The most recent decision of the trio – *Magnesium Elektron* – was decided in late 2017. In *Magnesium Elektron*, the plaintiff alleged that the defendants had infringed its patent in relation to processes for producing rare-earth mixed oxides. The plaintiff had adduced experimental evidence that the defendant's products were infringing. Tests had been done on third party products prior to the undertaking of the experiments in question, for the purpose of comparing the third party products with the samples produced by the plaintiff. The defendant requested for material relating to the tests conducted on the third party products.

22 Daniel Alexander QC (sitting as a Deputy Judge of the High Court) referred to an earlier case management conference for the matter, in which Birss J considered whether the plaintiff ought to disclose work-up experiments in view of the privilege attaching to them (see *Magnesium Elektron Ltd v Molycorp Chemicals & Oxides (Europe) Ltd* [2017] EWHC 1024 (Pat) ("*Magnesium Elektron (CMC)*")). Birss J ordered disclosure along the lines of that in *Mayne Pharma* ("*Mayne Pharma* disclosure"). Birss J recognised that *Mayne Pharma* was an "inevitable result" case, but held that the principles in relation to the disclosure of work-up experiments were not limited to "inevitable result" cases (*Magnesium Elektron (CMC)* at [19] and [22]).

23 Alexander QC opined that *Magnesium Elektron (CMC)* concerned the "macro" question of whether *Mayne Pharma* disclosure should be given in cases other than the "inevitable result" cases; in contrast, the issue before Alexander QC concerned the "micro" question of precisely what further disclosure was required having regard to the material which had been provided (*Magnesium Elektron* at [34]). Against this backdrop, Alexander QC observed that *Honeywell* and *Electrolux* were not of complete assistance to Pumfrey J in *Mayne Pharma*, because *Honeywell* and *Electrolux* were concerned with very different factual contexts – specifically, they were concerned with "different experiments which had not been deployed by the party concerned" or "abandoned" experiments, rather than work-up experiments. Furthermore, neither *Honeywell* nor *Electrolux* had dealt with the dimension of privilege (see [20] above).

24 On the issue of the waiver of privilege, Alexander QC examined a series of authorities and concluded that the law operated an element of consequential procedural control following the deployment of a document (for instance, the

service of the Notice of Experiments), where the scope of waiver was a function of the contents of the document and the nature of its deployment (*Magnesium Elektron* at [38]–[60]). He emphasised that *Nea Karteria* and authorities subsequent to it had taken a sophisticated approach to implied waiver which depended, *not* merely on fact that a document has been deployed, but also on the express and implied representations made by the act of its deployment (*Magnesium Elektron* at [58]).

25 Against this backdrop, Alexander QC held that *Mayne Pharma* disclosure did not extend beyond "materials recording preliminary investigation leading to the particular experiment which is deployed in evidence", and did not extend to "other parts of an overall experimental programme even if the design of the experiment in question may have drawn on earlier experiments" (*Magnesium Elektron* at [90]). He acknowledged that there was often no uncontroversial way of treating one part of an experimental programme as being completely separable from another, given that some aspects may involve deciding what experiments to undertake, others involve undertaking the experiments themselves, and yet others involve interpreting the results (*Magnesium Elektron* at [91]). However, he observed that were two types of cases in which *Mayne Pharma* disclosure would be clearly and easily applicable, namely (*Magnesium Elektron* at [92]–[96]):

> (a) First, the "inevitable result" cases. In such cases, the argument is that certain types of experiments would inevitably be selected and undertaken in a certain manner, and that those experiments would inevitably engender certain results. In view of the nature of such cases, information ought to be provided in relation to how the experiments

were selected and conducted, and the manner in which they were carried out. This was, in fact, the very basis for the decision in *Mayne Pharma*.

(b) Second, the "completeness of data" cases. In such cases, the issue is whether an experiment is repeatable or exhibits significant variation in result. Having a partial view of the data may lead to unfairness, and as such, a Court may not permit a party to deploy only the test runs that support its case.

26 Beyond these two types of cases, other cases may be less straightforward, and a "more cautious and focused approach" would be required in determining issues relating to the waiver of privilege and the scope of disclosure (*Magnesium Elektron* at [98] and [109]). In Alexander QC's view, there should not be an "implied" or "consequential" waiver of privilege over "precursor or surrounding material" simply on the basis that the experiments had been disclosed, even if it may be possible to find answers to the deployed experiments "by rummaging around in earlier material" (*Magnesium Elektron* at [98]). He emphasised that there was no warrant for "broad and general disclosure of all information about earlier experiments on which the experiments in question may have been based if a later experiment is deployed" (*Magnesium Elektron* at [109]). He further opined that waiver of privilege in "material not deployed" should only be treated as having taken place "to a limited additional extent", and only in so far as necessary to satisfy the specific objectives of the law relating to waiver as set out in *Nea Karteria* (*Magnesium Elektron* at [109]).

27 On the facts of *Magnesium Elektron* itself, Alexander QC recognised that the request for documents relating to the tests on the third party products

may have included documents that provided some explanation on why the particular experimental evidence in question was adduced by the Plaintiff. However, after considering the principles relating to waiver of privilege, and in particular the "restrictive approach to waiver in the general law and in *Mayne Pharma*", Alexander QC concluded that privilege had not been impliedly waived, and found that it would not be unfair for the plaintiff to withhold disclosure of the precursor experiments (*Magnesium Elektron* at [123]). He also found that further disclosure would be neither necessary nor proportionate, given the likely costs involved and the value to be gained from the disclosure of such material (*Magnesium Elektron* at [126]).

The applicable legal principles

28 In the absence of local jurisprudence relating directly to the discovery of experiments and experimental material, the three UK Patent Court decisions provide useful guidance. Indeed, the fact that paragraph 7.1 of Practice Direction 63 of the UK Civil Procedure Rules is *in pari materia* with O 87 A r 6 of the Rules of Court further enhances the persuasiveness of these English decisions.

29 It has been observed that there is a "perennial tension" in the common law discovery process, brought about by the attempt to achieve *both* justice *and* efficiency (see *Breezeway Overseas Ltd and another v UBS AG and others* [2012] 4 SLR 1035 ("*Breezeway*") at [20]). A particular instantiation of this tension surfaces in patent litigation when discovery is sought for documents relating to experiments. Experimental evidence may have significant probative value at trial, and may even be accorded greater weight than the opinions of an expert witness (see [19] above). It is therefore unsurprising that there is a tendency for parties to indulge in "seemingly endless request[s] for the

absolutely complete picture", even where there is limited reason to suppose that there is anything of real relevance to be found in the material that has yet to be disclosed (*Magnesium Elektron* at [113]). Put another way, there is a tendency for parties to seek over-disclosure of documents relating to experiments, with the discovery sought burgeoning beyond all proportion to the case at hand. This quest for "full information" and "perfect justice" is one that may ironically defeat justice itself (see, *eg*, *Breezeway* at [20] and *Nichia Corp v Argos Ltd* [2007] EWCA Civ 741 at [51]).

30 A judicious balance therefore has to be struck in the discovery of documents relating to experiments. On the one hand, it is critical to ensure that a party has a fair opportunity to understand, consider and question the experiments conducted by his opponent. On the other hand, it is just as critical to ensure that his opponent is not put through an unnecessary, disproportionate and oppressive discovery process, or unfairly deprived of the protection accorded by the law of privilege. Beyond this broad calculus, it may be difficult to find a formulaic answer that would ensure that a proper balance is struck in every case. The difficulty in finding the right balance is exacerbated by the fact that the principles relating to discovery and privilege operate on different *legal* and *conceptual* planes. While both are important elements that facilitate the fair administration of justice, they address different concerns: the former seeks adequate disclosure to enhance the rectitude of judicial decision-making, whereas the latter safeguards the necessary conditions for effective legal representation (see, *eg*, *Skandinaviska Enskilda Banken AB (Publ), Singapore Branch v Asia Pacific Breweries (Singapore) Pte Ltd and other appeals* [2007] 2 SLR(R) 367 at [23]–[25]).

Work-up experiments

31 I now return to the trio of UK Patents Court decisions. In my view, *Mayne Pharma* disclosure applies specifically in the context of *work-up experiments*, and most clearly so in the "inevitable result" and "completeness of data" types of cases. The reasons for singling out these types of cases have been amply expounded upon by Alexander QC in *Magnesium Elektron* (see [25] above). The very nature of these types of cases supports the view that there should be disclosure of the material in question, as well as the "implied" or "consequential" waiver of privilege over such material. It is precisely in these types of cases that *Mayne Pharma* disclosure would likely achieve the balance mentioned at [30] above.

32 However, for cases falling *outside* these two types of cases, it is unclear whether the balance will be appropriately struck through an order for *Mayne Pharma* disclosure. A court should not be quick to assume that every request for the discovery of work-up experiments ought to be granted as a matter of course. Much will depend on the specific factual matrix of the case at hand; and in this regard, Alexander QC's call for a "more cautious and focused approach" is a salutary one. In examining such requests, the court has to carefully guard against the risk of making an order resulting in over-disclosure or an unjustifiable encroachment on the protection afforded by the law of privilege.

Abandoned experiments

33 In relation to *abandoned experiments*, I do not think that *Electrolux* has been "overruled" by *Mayne Pharma*. While Pumfrey J expressed a preference for the views of Jacob J in *Honeywell* (*contra* the views of Laddie J in *Electrolux*), he expressly limited his views to the specific context of *Mayne*

Pharma, *viz*, work-up experiments (see [19] above). Furthermore, it is at least implicit from *Mayne Pharma*, and more expressly recognised in *Magnesium Elektron*, that the considerations in the context of work-up experiments may be different from those in other experiments. Indeed, even *within* the context of work-up experiments, Alexander QC observed that *Mayne Pharma*'s approach was to be read restrictively, and would only be clearly applicable in certain types of cases (see [25]–[26] above).

34 I would further observe that, in the context of abandoned experiments, the concerns expressed by Laddie J remain compelling and firmly anchored upon the well-established discovery principles of relevance and necessity. It ought to be remembered that O 24 rr 1(2)(*b*) and 5(3)(*b*) of the Rules of Court only compel a party to give discovery of documents which could adversely affect his own case, adversely affect another party's case, or support another party's case. In most situations, arguments for the discovery of abandoned experiments would centre on the first or third categories (*viz*, that such experiments may adversely affect a party's own case, or support another party's case). However, as Laddie J pointed out, there are various possible reasons for which experiments may be abandoned – for instance, the lack of clarity of the experiment, the openness of the experiment to attack, the complexity involved in explaining the experiment, *etc* (see [14(b)] above). Many of these reasons may have nothing to do with adversely affecting a party's own case, or supporting another party's case; or, in other words, documents relating to the abandoned experiments may be *irrelevant* for the purposes of discovery. Furthermore, *even if* O 24 rr 1(2)(*b*) or 5(3)(*b*) of the Rules of Court is satisfied in relation to certain abandoned experiments, it must still be shown that such discovery is *necessary* for the purposes of O 24 r 7 of the Rules of Court.

35 It is also important to consider the dimension of privilege in the context of abandoned experiments. This had not been dealt with in *Honeywell* and *Electrolux* (see [20] and [23] above), although it ought to be noted that the need to waive privilege appeared to be a factor motivating Laddie J's decision *against* ordering the disclosure of abandoned experiments (see [14(c)] above). I would also reiterate the limited approach to the waiver of privilege in relation to material that has not been deployed (see [26] above). In the absence of any detailed submissions by the parties on the waiver of privilege in relation to abandoned experiments, and in view of my decision in relation to Request 6 (at [59]–[61] below), I limit my observations to the following. The waiver of privilege ought to be approached more restrictively in the context of abandoned experiments than in the context of work-up experiments. Unlike work-up experiments which (by their very nature) relate directly to material that has been deployed (*viz*, the experiments that are the subject of the Notice of Experiments), abandoned experiments may have no direct relation to deployed material.

Decision on the Experiment Requests

36 I turn now to address each of the five Experiment Requests.

Request 2

37 Request 2 seeks all documents relating to any experimental procedures conducted on, machinery setup or test results of the Samples, whether or not the Samples had come into the Plaintiff's possession.

38 Defendant's counsel acknowledged that Request 2 was broad, but argued that it should be allowed. This was because the Technical Notes were

mere summaries of the experiments conducted, and were written by the Plaintiff's employees who must have had access to, or had sight of, the original and contemporaneous reports of experiments conducted by the scientists as well as the raw data of any in-house experiments. As such, the Defendant required *all* the base material sought in Request 2 in order to develop a complete understanding of the experiments that were conducted. In terms of specifics, Defendant's counsel pointed to documents relating to the *calibration* of the machinery used in the conduct of experiments disclosed in the Plaintiff's Notice of Experiments. Defendant's counsel contended that it was insufficient for the Plaintiff to merely exhibit instrument manuals explaining the steps to be taken for calibration; instead, the Defendant required documents setting out the actual calibration of the machines by the person conducting the experiments.

39 Plaintiff's counsel raised two main contentions in resisting Request 2:

(a) First, the Notice of Experiments Regime allowed the opposing party to be apprised of the experiments, and to decide how best to respond. If the Defendant wished to object to the conduct of experiments in the Notice of Experiments, then the Defendant ought to have requested for a repeat of those experiments, failing which, it ought to be precluded from challenging the *conduct* of the experiments (although it would remain open for the Defendant to object to the experiments on other grounds such as the fact that the experiments chosen were inappropriate to measure the characteristic in question).

(b) Second, Request 2 was overly broad. In particular, Request 2 was not limited to work-up experiments (which are the subject matter of Request 5), and extended instead to documents relating to all

experiments, whether or not these documents have come within the Plaintiff's possession.

40 In relation to Plaintiff's counsel's first contention, it ought to be noted that the repetition of experiments is neither mandated, nor the only way an opposing party can challenge an experiment at trial. As recognised in *Magnesium Elektron*, even under the Notice of Experiments Regime, a party may reasonably decide not to request a repeat of experiments, and choose instead to criticise an experiment for not being sufficiently validated or probative (*Magnesium Elektron* at [78]). In the present case, this is precisely what the Defendant has opted to do. It should also be kept in mind that the parties had previously unsuccessfully attempted to come to an agreement on a protocol for experiments to be conducted on neutral samples, and the Plaintiff had in fact withdrawn its application for the neutral samples. In the circumstances, it does not appear practical to pursue the option of repeating the experiments in the present case.

41 However, I agree with Plaintiff's counsel's second contention that Request 2 is overly broad ranging. Indeed, Request 2 appears to entirely subsume Requests 3 to 6. While Defendant's counsel has strenuously argued that all experimental material relating to the Samples would be essential for the trial, this appears – without more – to be an unjustifiable and disproportionate attempt to leave no stone unturned.

42 There is, however, one limited aspect for which the Defendant has provided sufficient justification to warrant further discovery. This is as regards the documents concerning the *actual calibration* of the equipment in the conduct of the experiments. While the Plaintiff has disclosed several instruction

manuals on calibration and has stated on affidavit that some of the calibrations were done by a "reputable third party" (such as Laser Zentrum Hannover or the University of Warwick), these explanations did not provide any insight as to the actual calibration of the equipment for the purposes of the experiments in the Notice of Experiments. Any errors in calibration may well produce inaccurate data, which could result in the Samples being incorrectly found to exhibit infringing characteristics. In fairness, the Plaintiff ought to disclose these calibrations.

43 As such, I grant Request 2, limited only to documents relating to the actual calibration done for the experiments described in the Plaintiff's Notice of Experiments.

Request 3

44 Request 3 seeks all documents relating to the standards or benchmarks created as a result of any experiments, insofar as these standards or benchmarks were used by or referred to in the Technical Notes.

45 Defendant's counsel contended that Request 3 should be allowed because the standards or benchmarks relied upon by the Plaintiff in its experiments were not industry standard references. In Defendant's counsel's view, a non-infringing sample may be wrongly considered to be infringing, if the wrong standards or benchmarks were used, or if these the standards or benchmarks were used inappropriately. As the Plaintiff intended to rely exclusively on the Technical Notes as proof that the Samples infringed the Patents, the Defendant required all base material that the Plaintiff's employees had relied upon in preparation of the Technical Notes.

46 Plaintiff's counsel pointed out that the Plaintiff had already provided explanations and responses to each standard or benchmark by way of affidavit evidence. The standards or benchmarks may be categorised into two groups, as follows:

(a) First, where the Technical Reports have already disclosed the relevant information on the specified standard or benchmark. The Defendant has not explained why additional documents were required given that the relevant information was already found in the Technical Reports.

(b) Second, where the Plaintiff has already disclosed additional documents in the affidavit filed to resist SUM 1654, relating to the specified standards or benchmarks in question. For instance, the Plaintiff has stated in that affidavit where the relevant information may be found, and exhibited the relevant information as well.

47 The Plaintiff has further averred on affidavit that the evidence provided was sufficient for a skilled person to understand the nature of the identified standards or benchmarks, and how these were used to support the conclusions advanced in the Technical Reports.

48 The Defendant's response was that the information has been "reproduced in the abstract and without context", and as such the Defendant still required "all documents relating to these standards and/or benchmarks".[1] However, the Defendant did not go further to give examples of the alleged inability to understand the explanations given, or to pinpoint what issue-specific

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1 27th Affidavit of Mehta Vishal Jatin (dated 25 May 2018) at paragraph 33.

information it was seeking. Instead, Request 3 is a generally-worded request for further documents on benchmarks and standards. This would not be sufficient to justify an order for further discovery, given that the Plaintiff has already provided affidavit explanations for each standard or benchmark identified. In the circumstances, I see no basis for Request 3, and therefore disallow the request.

Request 4

49 Request 4 contains two separate sub-requests relating to information captured by the Metripol system.

Request 4(i) – data presented in PDF file

50 Request 4(i) seeks raw data documents on measurements taken by the Metripol system in relation to the Samples. Defendant's counsel contended that this request should be allowed because the Plaintiff had disclosed "rows and rows of data" that would originally have been in a 1025 x 1361 spreadsheet, but in the form of a PDF file in A4 size. The columns and rows of the spreadsheet had therefore been broken into different sections, causing the data to be "truncated and undecipherable". The Plaintiff had explained that the conversion of the information into a PDF file was intended to make it "easier to review" and "exhibit in affidavits". The Plaintiff had also provided an affidavit explanation on how the Defendant may use the information contained in the PDF file to ascertain the requisite values for specified pixels.

51 In my view, the conversion of data to the PDF file has rendered the data impossible to review. Even with the explanation provided by the Plaintiff in relation to ascertaining the requisite value for specified pixels, the proffered

approach would be unworkable in practice because the explanation allowed only for obtaining the value for a single specified pixel. It would be impractical for the Defendant to use this approach in analysing the selected area, which involves upwards of a million pixels. While the Plaintiff has claimed that the Defendant would require specialised software to view the data in its original format, this would not be a reason for withholding discovery of the data in usable form. I therefore grant Request 4(i).

Request 4(ii) – coloured raw images of the Samples

52 Request 4(ii) seeks coloured raw images of the Samples that were captured by the Metripol system. The Defendant's main basis for this request is that a comparison of two images of Sample 2 revealed that the images were slightly different. In the Defendant's view, there were only two possible explanations for the difference: either the images were converted from coloured images to greyscale images, or the images were taken by different Metripol measurements.

53 The Plaintiff's affidavit evidence is that while the Metripol system is capable of exporting the images either in coloured format or in black and white, the Plaintiff had only received black and white versions of the images from the University of Warwick. Furthermore, in relation to the difference in the two images, the explanation provided in the Plaintiff's submissions is that both images of Sample 2 were of the same sample and of the same data, albeit displayed in different ways.

54 I disallow Request 4(ii) in view that the Plaintiff had already disclosed the images which it had received and relied upon, and also in view of the explanation given as to the differences between the two images of Sample 2.

However, I order that the Plaintiff furnish the explanation on the differences between the two images by way of an affidavit, as the explanation is currently to be found only in the Plaintiff's submissions.

Request 5

55 Request 5 seeks all documents relating to work-up experiments that were used by, relied on or referred to in the Technical Notes. *Mayne Pharma* and *Magnesium Elektron* are particularly relevant to this request.

56 Defendant's counsel acknowledged that the Plaintiff had stated on affidavit that there were "no other work-up experiments"[2] apart from those already disclosed in the Technical Notes. However, Defendant's counsel contended that this was a misleading averment, because the Plaintiff actually meant that the work-up experiments were "mentioned" (*contra* "disclosed") in the Technical Notes, and such mere "mention" was inadequate for the Defendant to understand the work-up experiments in question. Defendant's counsel argued that without disclosure of the preparatory or intermediary steps, the Defendant would not have a full understanding of the experiments conducted by the Plaintiff, and would not be able to prepare its evidence against the Plaintiff's claim of infringement. As such, on the authority of *Mayne Pharma* and *Magnesium Elektron*, the Defendant sought the discovery of all documents relating to the work-up experiments.

57 Plaintiff's counsel raised two arguments:

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2 15th affidavit of Susan Jane Fletcher Watts (dated 30 April 2018) at paragraph 80.

(a) First, the Technical Reports were detailed documents that discussed the various experimental procedures and results in relation to the Samples. Given that the Plaintiff had averred on affidavit that all the work-up experiments were already discussed in the Technical Reports, the Plaintiff had *prima facie* fulfilled its *Mayne Pharma* disclosure obligations.

(b) Second, the present case falls outside the types of cases for which *Mayne Pharma* disclosure is more easily and clearly applicable. In this regard, it is insufficient for the Defendant to simply argue that because the Plaintiff had filed the Notice of Experiments, the Plaintiff must give discovery of all work-up experiments. Instead, the Defendant must show that the work-up experiments constitute the necessary context within which the experiments in the Notice of Experiments are to be assessed, without which there will be a misunderstanding or misconstruing of the experiments in the Notice of Experiments.

58 The deployment of a document (such as the Notice of Experiments) does not, in and of itself, "automatically open a floodgate to a wide destruction of privilege" (*Magnesium Elektron* at [47]). Thus far, the Defendant has merely made sweeping statements that it would be prejudiced in its preparation for trial if Request 5 is not granted, without demonstrating with any specificity as to why the documents sought are relevant and necessary for the Defendant to understand the experiments in the Plaintiff's Notice of Experiments. In this regard, it ought to be noted that none of the cases cited to me support an order for specific discovery of work-up experiments being made simply on the back of a sweeping averment that more information is needed. Without cogent and specific reasons for the discovery sought, and without compelling arguments on

why privilege ought to be waived in relation to these documents, I do not think that the balance (see [30] above) would be achieved by ordering the discovery of documents in Request 5. This is so, notwithstanding the fact that Request 5 specifically relates to work-up experiments. I therefore disallow Request 5.

Request 6

59 Request 6 seeks all documents relating to *abandoned* experiments that were conducted on the Samples. Defendant's counsel clarified by way of oral submissions that Request 6 related to documents which fall outside of Request 5, and that these documents have nothing to do with the Technical Notes.

60 In relation to Request 6, Defendant's counsel argued that the Plaintiff ought to disclose *all* abandoned experiments regardless of the reasons for abandonment. In Defendant's counsel's view, it was insufficient for the Plaintiff to aver that it did not abandon any experiments "simply because the results were undesirable".[3]

61 The legal principles relating to abandoned experiments has been discussed at [33]–[35] above. In relation to Request 6, the Plaintiff has filed an affidavit averring that no experiment had been abandoned simply because the experiments engendered results undesirable to the Plaintiff. The Defendant has not provided any compelling reason to cast doubt on this averment, and has instead simply argued that it wished to have sight of all abandoned experiments, regardless of the reasons for which the experiments were abandoned. Such a broad and sweeping argument provides little basis for determining that Request 6 is relevant and necessary. It is also a request for the discovery of documents

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[3] 15th affidavit of Susan Jane Fletcher Watts (dated 30 April 2018) at paragraph 83.

which may be protected by privilege, without good justification for why privilege ought to be waived in the circumstances of the present case. I therefore disallow Request 6.

Conclusion

62 For the foregoing reasons, I grant Request 2 (limited only to documents relating to the actual calibration done for the experiments described in the Plaintiff's Notice of Experiments) and Request 4(i). I disallow Request 4(ii), but order that the Plaintiff furnish an explanation on affidavit in relation to the reasons for the difference between the two images of Sample 2. I disallow Requests 3, 5 and 6 in their entirety.

63 In closing, I echo the observation in *Magnesium Elektron* that – at least in relation to the discovery of experiments and experimental material in the context of patent litigation – there is much value to be found in requiring parties to seek "issue-specific information", rather than engaging in interlocutory battles seeking the specific discovery of broad classes of documents. This is particularly so in patent disputes (such as the present) which involve a massive and complex universe of information relating to experiments and experimental material. In such cases, a movement towards the seeking and provision of "issue-specific information" may well present the surest step towards achieving a judicious balance: between a party's ability to understand, consider and question his opponent's experiments on the one hand, and the burden placed upon his opponent to give discovery of (privileged) material on the other.

64 The present case provides some illustrations of the importance of specificity in seeking information, particularly in relation to the limited granting of Request 2 (see [43]–[44] above) and the rejection of Requests 3 and 5 (see

[48] and [58] above). Had the requests for further discovery been more focused and targeted at specific issues, the Defendant may have had a more compelling case for further discovery to be ordered.

65 I will hear parties on costs.

Justin Yeo
Assistant Registrar

Mr Jason Chan, Mr Melvin Pang and Mr Nicholas Ong
(Amica Law LLC) for the Plaintiff;
Mr Tony Yeo, Ms Meryl Koh and Mr Javier Yeo
(Drew & Napier LLC) for the Defendant.